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Water Supply Outlook For Washington

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SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
February 1, 1982

USDA SCS PORTLAND OR 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become mare accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snaw accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject ta a greater change than those made on later dates.

The snow course measurement is obtained by sampling snaw depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly ar semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks af automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snaw water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation ta date, and storage in larger reservoirs.

Snow survey and soil moisture data far the period of record are published by the Soil Conservation Service by states about every five years. Data far the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Partland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Canservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

☆ GPO 1981 593-783

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

NORMAN A. BERG
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C

Released by

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

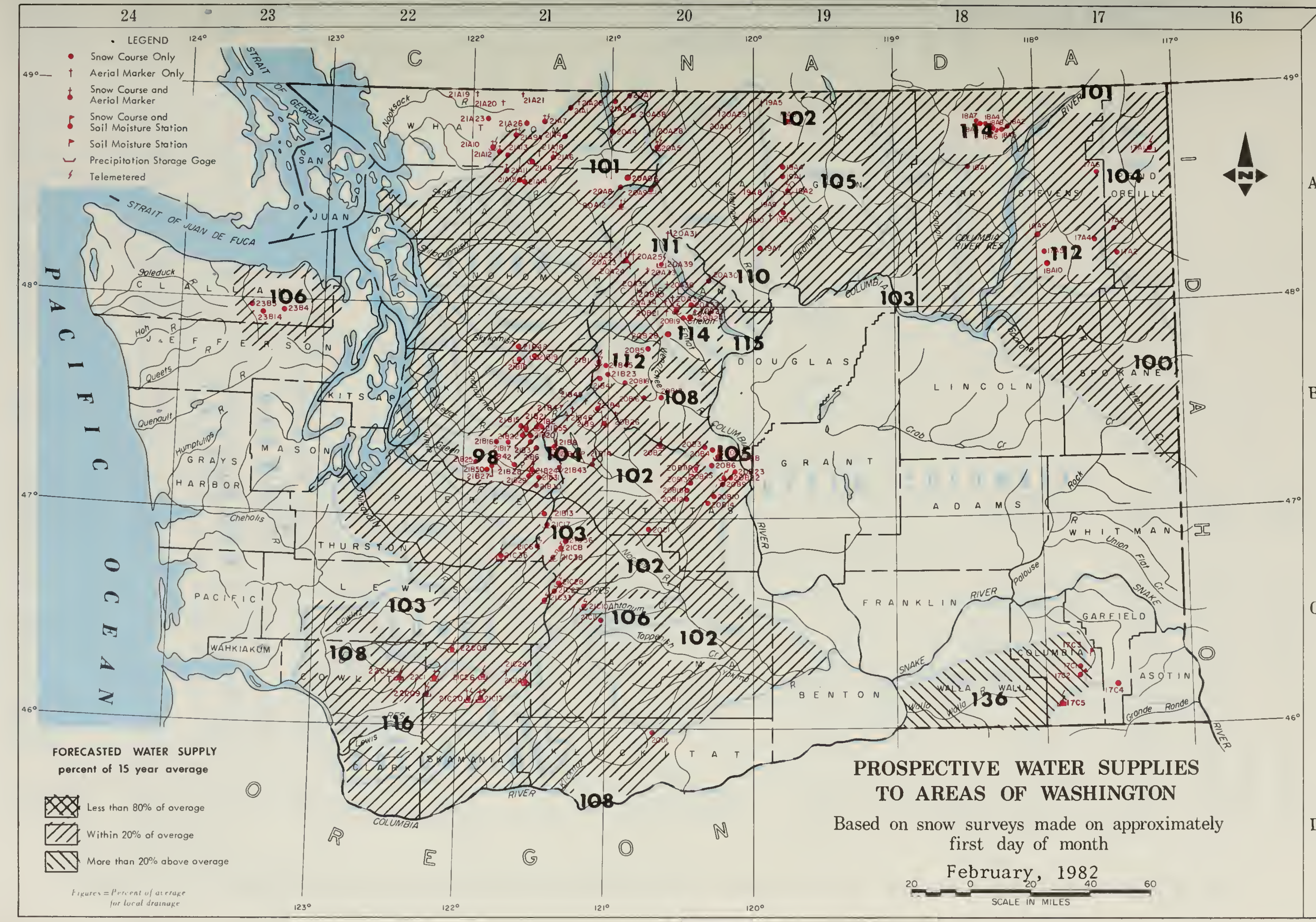
In Cooperation with

DONALD W. MOOS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor
JAMES K. MARRON, Assistant Snow Survey Supervisor
DONALD R. EASTLUND, Hydrologic Technician
NORINE P. KENT, Statistical Assistant

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201


PROSPECTIVE WATER SUPPLIES
TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
February, 1982
SCALE IN MILES
LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF GEORGIA
STRAIT OF JUAN DE FUCA
SAN JUAN
WHATCOM
OKANOGAN
FERRY
STEVENS
PEND OREILLE
SKAGIT
SNOHOMISH
CHELAN
DOUGLAS
LINCOLN
SPOKANE
CLALLAM
JEFFERSON
KITSAP
MASON
GRAYS HARBOR
KING
KITTITAS
GRANT
ADAMS
WHITMAN
PIERCE
THURSTON
PACIFIC
LEWIS
YAKIMA
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
BENTON
WAHKIAKUM
COWLITZ
SKAMANIA
CLARK
KLICKITAT
COLUMBIA RIVER
SNAKE RIVER
101
102
114
104
105
101
111
110
112
103
106
114
115
100
112
108
98
104
105
102
103
102
103
106
102
108
136
116
108

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

Pend Oreille River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970

Kettle River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600

Colville River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370

Sonpoil River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sherman Creek Pass	18A1	19	36N	35E	5350

Okonogan River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Poysoyten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2SP	33	37N	24E	4500
Storvotion Mtn.	19A10a	15	35N	23E	6750
Touts Coulee	19A6	30	39N	25E	2845

Methow River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Billy Goat Poss	20A10a	10	38N	20E	6400
Dollor Watch	20A29a	8	39N	20E	7000
Harts Poss	20A5SP	7	37N	18E	6500
Horseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650

Chelon Lake Basin

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Pork Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Poss	20A9SP	21	35N	17E	4780
Safety Harbor	20A30a	32	31N	20E	6300
War Creek Poss	20A31a	34	33N	18E	6500
Mirror Lake	20A39	30	31N	18E	5600

Entiot River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Blue Creek G.S.	20B28a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiot Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20820	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Poss	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900

Wenotchee River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Berne-Mill Creek	21823	7	26N	15E	3170
Berne-Mill Creek (New)	21841SP	13	26N	14E	3240
Blewett Poss No. 2	2082 SP	35	22N	17E	4270
Chiwaukum G. S.	20816	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Poss	21B1SP	14	26N	13E	4070
Stevens Poss Sond Shed	21B45	12	26N	19E	3700
Trough #2	20825SP	10	20N	20E	5310

Colockum Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Colockum Creek Upper	20822	11	20N	20E	5300
Colockum Creek Lower	20823	1	20N	20E	4300

Squilchuck Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Visto	2084	18	21N	20E	3400

Stemilt Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20875P	30	21N	20E	4400

Yokimo River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Poss	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20811SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemoh Creek	21847a	7	23N	13E	3327
Monostash	20C1	24	17N	16E	3935
Morse Lake	21C17SP	6	16N	11E	5400
Nonum	20B13	4	20N	19E	3875
Troil Creek	20B14	20	19N	20E	3360
Tunnel Avenue	2188P	13	21N	11E	2450
Von Epps Poss	20826a	16	23N	15E	5925
Wolters Flat	20815	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Poss (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

Asotin Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Spruce Springs	17C4	9	8N	40E	5700

Touchet River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Couse	17C3m	2	9N	40E	3370
Homestead	17C1	11	9N	40E	4030
Mortin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Touchet No. 2	17C5SP	6	7N	40E	5530

Klickitot River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sotus Pass	20D1	21	6N	17E	4030

Lewis River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250

Cowlitz River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cayuse Poss	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

Nisqually River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Poradise Park (New)	21C35SP	13	15N	8E	5500

White River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Corral Poss	21B13SP	30	18N	11E	6000

Green River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Airstrip	21B24P	18	20N	11E	1800
Chorley Creek	21825	27	21N	8E	1200
Cougar Mountain	21842SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B43SP	14	20N	11E	5000
Stompede Poss	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100

Cedar River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gordner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washington	21B15P	8	22N	9E	3000
Rex River	21B17P	11	21N	9E	2400
South Fork Cedor	2186P	24	21N	10E	3000
Tinkhom Creek	21B20P	1	21N	10E	3400

Snoqualmie River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Alpine Meodow	21B48	31	27N	9E	3500
Ollollie Meodows	21B2P	19	22N	11E	3625
South Fork Tolt	21B18P	26	26N	9E	1900
Olallie Meodows East	21B55SP	20	22N	11E	8700

Skykomish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Loke Elizobeth	21B19P	33	26N	10E	2900

Skagit River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beover Creek Trail	21A4	35	39N	12E	2200
Beover Poss	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Pork	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

Baker River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dock Butte	21A11A	8	36N	8E	3800
Easy Poss	21A7A	19	39N	11E	5200
Jasper Poss	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500

Nooksock River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bald Mountoin	21A19a	7	40N	7E	4400
Conyon	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Ponorama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

Dungeness River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Pork	23B4	1	28N	5W	5200

Morse Creek

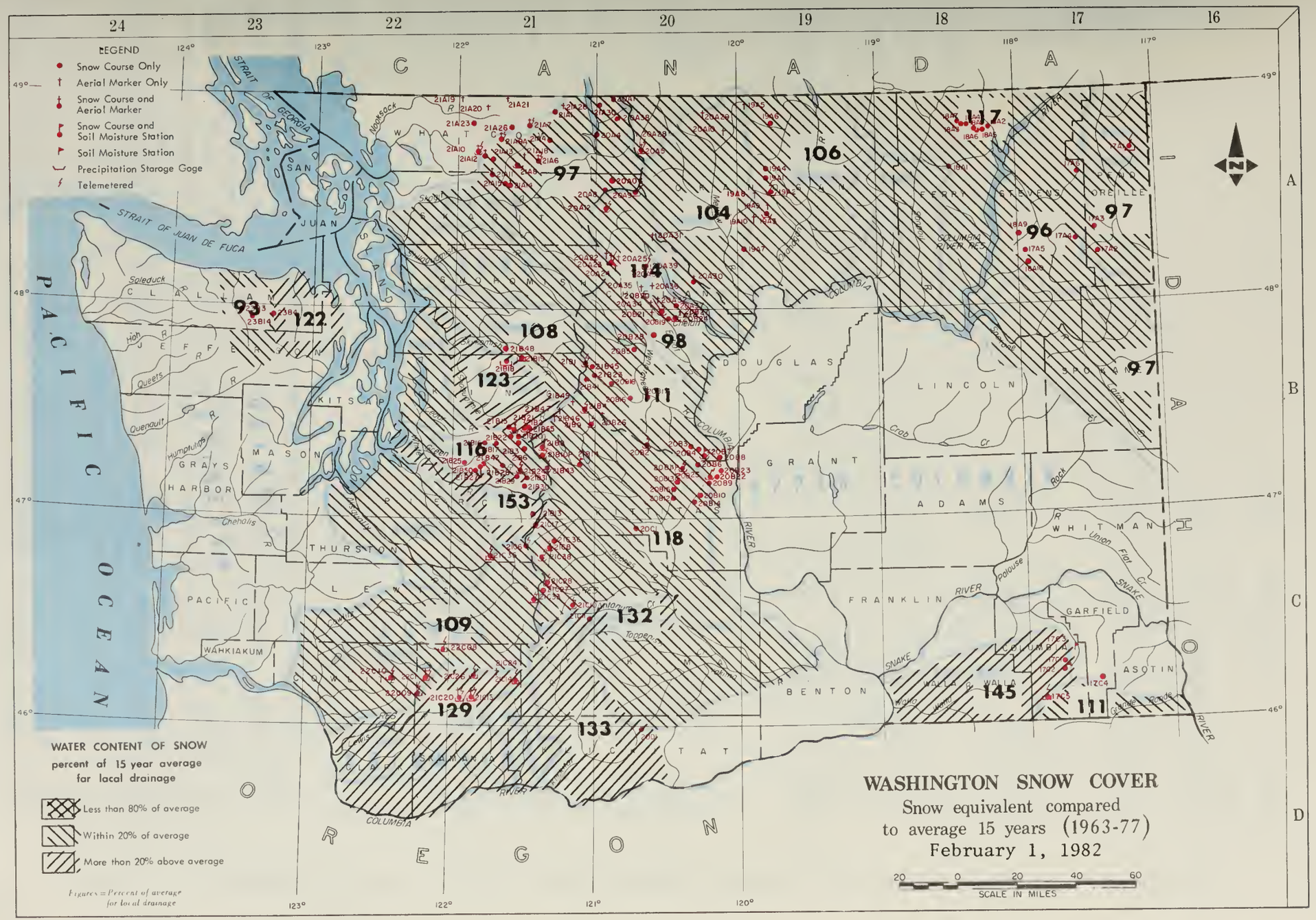
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cox Volley	23B14	31	29N	6W	4500

Elwho River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Hurricone	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow


LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
WATER CONTENT OF SNOW
percent of 15 year average for local drainage
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
WASHINGTON SNOW COVER
Snow equivalent compared to average 15 years (1963-77)
February 1, 1982
SCALE IN MILES
CANADA
OREGON
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
COLUMBIA RIVER
SNAKE RIVER
SAN JUAN
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SNOHOMISH
CHELAN
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
KITSAP
KING
DOUGLAS
LINCOLN
SPOKANE
GRAYS HARBOR
MASON
PIERCE
KITTITAS
GRANT
ADAMS
WHITMAN
THURSTON
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
YAKIMA
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
BENTON
WALLA WALLA
CLARK
SKAMANIA
KLICKITAT
93
122
108
123
116
153
109
129
133
132
118
111
114
98
104
106
97
96
117
145

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

Pend Oreille River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bayer Mountain	17A2	7	31N	43E	5250
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Winchester Creek	17A3	30	33N	43E	2970

Kettle River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boulder Raad	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
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Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Taga	18A10	6	29N	38E	3370

Sanpoil River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sherman Creek Pass	18A1	19	36N	35E	5350

Okanagan River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Muttan Creek No. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salman Meadows	19A2SP	33	37N	24E	4500
Starvation Mtn.	19A10a	15	35N	23E	6750
Tauts Caulee	19A6	30	39N	25E	2845

Methaw River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Billy Goat Pass	20A10a	10	38N	20E	6400
Dallar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Harseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650

Chelan Lake Basin

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbar	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirrar Lake	20A39	30	31N	18E	5600

Entiat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Blue Creek G.S.	20B28a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20B20	22	29N	18E	3540
Pape Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tammy Creek	20B21a	10	28N	18E	4900

Wenatchee River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	2082SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	2085	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Trough #2	20B25SP	10	20N	20E	5310

Colockum Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Colockum Creek Upper	20B22	11	20N	20E	5300
Colockum Creek Lower	20B23	1	20N	20E	4300

Squilchuck Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400

Stemilt Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400

Yakima River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	2189SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Jae Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21B47a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Marse Lake	21C17SP	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20B26a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

Asatin Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Spruce Springs	17C4	9	8N	40E	5700

Touchet River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Couse	17C3m	2	9N	40E	3370
Hamestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Touchet No. 2	17C5SP	6	7N	40E	5530

Klickitat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Satus Pass	20D1	21	6N	17E	4030

Lewis River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250

Cawlitz River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

Nisqually River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Paradise Park (New)	21C35SP	13	15N	8E	5500

White River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Carral Pass	21B13SP	30	18N	11E	6000

Green River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snawshae Butte	21B43SP	14	20N	11E	5000
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100

Cedar River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washington	21B15P	8	22N	9E	3000
Rex River	21B17P	11	21N	9E	2400
South Fork Cedar	21B6P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400

Snoqualmie River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
South Fork Tolt	21B18P	26	26N	9E	1900
Olallie Meadows East	21B55SP	20	22N	11E	8700

Skykamish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Lake Elizabeth	21B19P	33	26N	10E	2900

Skagit River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brawn Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadaws (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadaws Cabins	20A8	29	36N	14E	1900
New Hozameen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

Baker River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Racky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watsan Lakes	21A8P	25	37N	9E	4500

Naaksack River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bald Mountain	21A19a	7	40N	7E	4400
Canyan	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panarama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

Dungeness River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Park	23B4	1	28N	5W	5200

Marse Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cox Valley	23B14	31	29N	6W	4500

Elwha River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

February 1,1982

The outlook for water supply in the state of Washington can be considered near normal as of February 1, 1982. The snowpack is average or above and rainfall has been better than normal. The snowpack now ranges from a high of 45 percent above normal in the southeastern portion of the state to 7 percent below average on the Elwha River near Port Angeles. Above normal snowfall occurred over the northern portion of the state and tributary basins during January but near normal snow fell over the rest of the state.

SNOW COVER

The snowpacks in the Upper Columbia portion of the watershed average 8 percent above normal and 312 percent greater than last year. Along the Lower Columbia portion of the basin, snow cover is 29 percent greater than average and 774 percent better than last year. In the Puget Sound drainage, February 1 snow cover was 19 percent above average and 677 percent better than last year. The extremes occurred on the Olympic Peninsula where the current snowack is 8 percent greater than average but 2148 percent better than last year.

RESERVOIRS

The Yakima irrigaion reservoirs have the least amount of water in storage of all major reservoirs in the state. With a capacity of 1,066,000 acre-feet, the current storage is only 407,800 acre-feet, or 38 percent. The average capacity is 656,400 acre-feet. Most of this deficit is in Lake Cle Elum. The storage in this reservoir is only 13 percent of capacity. Lake Cle Elum is the largest of the five Yakima reservoirs and is the easiest to fill. It is anticipated that all reservoirs will fill with the spring runoff. Most power reservoirs have above normal amounts of water in storage -- 34 percent above for Lake Roosevelt, and 9 percent above for Lake Chelan. Ross Reservoir has water in storage that is 7 percent below normal.

PRECIPITATION

As reported by the National Weather Service, January rainfall was above normal in all drainage divisions used for this report. The wettest areas were along the east slopes of the Cascades and in the Okanogan drainage, both with 123 percent of normal rainfall. The driest area was the Pend Oreille-Spokane drainage of eastern Washington and northern Idaho with a 101 percent of average rainfall. The November through January precipitation now ranges from a low of 96 percent of normal for the Pend Oreille-Spokane drainage to a high of 114 percent for the southeastern portion of the state. Fall rainfall varied from 12 percent below normal -- again on the Pend Oreille-Spokane -- to a high of 64 percent above for the Okanogan drainage division.

STREAMFLOW

River flows during January were generally below normal with a few exceptions. The Kettle had an outflow of 86 percent above normal and the Columbia at Birchbank, 7 percent above. The least amount of water came from western Montana where the Pend Oreille was only 46 percent of average. Forecasts of spring and summer runoff are generally for near normal outflows with the only subnormal amounts occurring in the Puget Sound drainages. The largest, percentagewise, is the forecast of Mill Creek at Walla Walla which is expected to flow 36 percent above normal during the April-September period. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - FEBRUARY, 1982

The following summarized runoff forecasts are based principally on mountain snowcover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. The forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1981 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet % 15-Yr. Avg.	Forecast period	1981	1980	1979	15-Yr. Average 63-77
COLUMBIA BASIN							
COLUMBIA RIVER SYSTEM							
Columbia River at Birchbank 1/	45900	101	Apr-Sept	48531	40816	34484	45510
	36700	101	Apr-July	38501	34085	27181	36358
	26500	101	Apr-June	27002	27623	19661	26197
Columbia River at Grand Coulee 1/	69800	103	Apr-Sept	70303	61016	52769	68026
	58500	103	Apr-July	58525	52320	44096	57050
	45600	103	Apr-June	44235	43871	35138	44280
Columbia River bl. Priest Rapids 1/	77400	105	Apr-Sept	77308	66512	55298	73911
	65400	105	Apr-July	64689	57767	46700	62444
	50900	105	Apr-June	49348	48667	37453	48479
Columbia River at The Dalles, OR 1/	113000	109	Apr-Sept	96997	93170	76843	103477
	96500	109	Apr-July	82171	79931	65758	88503
	77600	109	Apr-June	65104	68316	55016	71219
PEND OREILLE RIVER SYSTEM							
Pend Oreille River bl. Box Canyon	16300	104	Apr-Sept	13896	13271	11639	15643
	14900	104	Apr-July	13179	12116	11095	14334
	12800	104	Apr-June	11594	10776	10217	12277
KETTLE RIVER SYSTEM							
Kettle River nr. Laurier	2100	114	Apr-Sept	2181	1835	1259	1845
	1930	110	Apr-July	2039	1747	1216	1753
	1750	110	Apr-June	1711	1603	1132	1587
Colville River at Kettle Falls	150	112	Apr-Sept		116	63	134
	140	114	Apr-July		105	58	123
	130	113	Apr-June		97	55	115

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore-cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1970	15-Yr. Average 63-77
SPOKANE RIVER SYSTEM **							
Spokane River	2900	100	Apr-Sept	2238	2214	2809	2910
at Post Falls, ID 2/	2760	101	Apr-July	2145	2046	2757	2733
	2650	102	Apr-June	1960	1904	2678	2600
OKANOGAN RIVER SYSTEM							
Similkameen River	1550	102	Apr-Sept	1241	1479	872	1517
nr.Nighthawk	1430	101	Apr-July	1118	1391	812	1417
	1270	107	Apr-June	930	1247	728	1192
Okanogan River	1800	105	Apr-Sept		1551	909	1718
nr. Tonasket	1660	106	Apr-July	1363	1423	825	1564
	1460	112	Apr-June	1090	1240	730	1304
METHOW RIVER SYSTEM							
Methow River	1110	110	Apr-Sept		996	478	1011
nr. Pateros	1050	112	Apr-July		934	432	937
	890	113	Apr-June		811	382	791
CHELAN RIVER SYSTEM							
Chelan River	1430	115	Apr-Sept	917	1120	753	1238
at Chelan 3/	1250	116	Apr-July	812	1020	662	1080
	980	118	Apr-June	647	859	553	834
Stehekin River	980	111	Apr-Sept			566	883
at Stehekin	850	114	Apr-July			477	744
	650	117	Apr-June			387	557
Entiat River	275	114	Apr-Sept		216	134	241
nr. Ardenvoir	250	115	Apr-July		200	120	218
	200	115	Apr-June		172	104	174
WENATCHEE RIVER SYSTEM							
Wenatchee River	1450	112	Apr-Sept			893	1297
at Plain	1310	113	Apr-July			812	1156
	1000	111	Apr-June			704	903
Wenatchee River	1900	108	Apr-Sept	1249	1516	1165	1767
at Peshastin	1750	110	Apr-July	1148	1399	1074	1586
	1400	112	Apr-June	956	1208	938	1250
Stemilt Basin	140*	101	May-Sept				138*
nr. Wenatchee							
Icicle Creek	390	106	Apr-Sept				371
nr. Leavenworth	365	107	Apr-July				342
	300	108	Apr-June				279

* Thousands of Miners' Inches.

** Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane valley farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
YAKIMA RIVER SYSTEM							
Yakima River	150	104	Apr-Sept	95	115	124	144
nr. martin 4/	140	105	Apr-July	82	103	114	133
	115	101	Apr-June	73	95	101	114
Yakima River	990	102	Apr-Sept	700	792	714	975
at Cle Elum 5/	900	102	Apr-July	643	716	683	882
	780	104	Apr-June	563	646	599	750
Yakima River	2200	102	Apr-Sept	1194	1833	1388	2168
nr. Parker 6/	1990	102	Apr-July	1059	1733	1287	1954
	1760	104	Apr-June	961	1610	1179	1693
Kachess River	130	103	Apr-Sept	81	111	101	126
nr. Easton 7/	125	105	Apr-July	72	105	95	119
	105	102	Apr-June	66	91	88	103
Cle Elum River	500	104	Apr-Sept	313		348	479
nr. Roslyn 8/	450	103	Apr-July	282	350	326	435
	370	103	Apr-June	244	314	292	358
Bumping River	150	103	Apr-Sept	78	129	99	146
nr. Nile 9/	140	106	Apr-July	70	120	92	132
	110	104	Apr-June	63	111	82	106
American River	130	102	Apr-Sept			81	127
nr. Nile	120	103	Apr-July			74	116
	100	105	Apr-June			66	95
Tieton River	270	108	Apr-Sept	148	224	179	252
at Tieton Dam 10/	225	106	Apr-July	131	192	148	212
	185	110	Apr-June	108	166	120	168
Naches River	910	102	Apr-Sept	419	729	574	893
nr. Naches 11/	830	105	Apr-July	380	694	528	806
	700	103	Apr-June	339	638	478	678
Ahtanum Creek	50	106	Apr-Sept				47
nr. Tampico 12/	45	107	Apr-July				42
	40	108	Apr-June				37

4/ Observed flow corrected for storage in Lake Keechelus.
5/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.
6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.
7/ Observed flow corrected for storage in Lake Kachess.
8/ Observed flow corrected for storage in Lake Cle Elum.
9/ Observed flow corrected for storage in Bumping Lake.
10/ Observed flow corrected for storage in Rimrock Lake.
11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.
12/ Observed flow of North and South Forks (Combined).

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Forecast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
LOWER COLUMBIA RIVER SYSTEM							
Mill Creek	23.9	136	Apr-Sept			22.37	17.50
at Walla Walla	23.7	137	Apr-July			22.25	17.33
	23.4	136	Apr-June			22.14	17.15
Lewis River	1500	116	Apr-Sept	1096	1001	962	1298
at Ariel 13/	1300	115	Apr-July	971	883	830	1128
	1140	115	Apr-June	865	798	749	992
Cowlitz River	2200	103	Apr-Sept		1626	1563	2126
bl. Mayfield Dam	1960	106	Apr-July		1432	1367	1854
	1650	106	Apr-June		1275	1203	1553
Cowlitz River	3000	108	Apr-Sept	2390	1976	2046	2766
at Castle Rock 14/	2600	108	Apr-July	2125	1852	1792	2401
	2170	107	Apr-June	1875	1649	1574	2029
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
Dungeness River	170	106	Apr-Sept			110	160
nr. Sequim	140	108	Apr-July			90	130
	105	109	Apr-June			71	96
PUGET SOUND							
SKAGIT RIVER SYSTEM							
Skagit River	2500	98	Feb-Aug			1785	2532
at Newhalem 15/	2380	101	Apr-Sept			1648	2356
	2010	102	Apr-July			1359	1972
	1515	102	Apr-June			1102	1485
GREEN RIVER SYSTEM							
Green River	310	98	Apr-Sept				316
bl. Howard Hanson Dam 16/	280	98	Apr-July				284
	255	100	Apr-June				256

13/ Observed flow corrected for storage in Lake Merwin, Yale, and Swift Reservoirs.
14/ Observed flow corrected for storage in Mayfield Reservoir.
15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.
16/ Observed flow corrected for storage in Howard Hanson Dam.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about February 1, 1982, as percent of the same date in 1981 and 1980 and average of record.

Tributary Basin	No. of Courses Average	1982 Snow Water Expressed as percent of 1981	1980	1963-77 Avg.
UPPER COLUMBIA BASIN				
Pend Oreille	11	259	119	97
Kettle	15	205	207	117
Colville	5	262	118	96
Spokane	6	1178	158	97
Okanogan	27	299	159	106
Methow	6	190	123	104
Chelan	5	244	147	114
Entiat	11	195	119	98
Wenatchee	10	752	143	111
Yakima	24	612	162	118
Ahtanum	2	340	108	132
LOWER COLUMBIA BASIN				
Mill Creek	3	1217	173	145
Klickitat	1	843	179	133
Lewis	3	-	-	129
Cowlitz	2	562	154	109
PUGET SOUND				
White	2	377	184	153
Green	9	755	184	116
Snoqualmie	1	1340	258	123
Skykomish	2	818	148	108
Skagit	14	594	142	97
OLYMPIC PENINSULA				
Elwha	1	2170	258	93
Dungeness	1	2325	179	122

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (February) 1982	1981	1980	Normal
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	72.2	180.0	54.9	145.3
Columbia	Franklin D. Roosevelt Lake	5232.0	4961.6	4726.9	3063.5	3698.2
Columbia	Banks Lake	714.9	704.2	120.8	690.9	619.4
Okanogan	Conconully Reservoir	13.0	9.1	6.8	3.0	6.2
Okanogan	Conconully Lake	10.5	8.9	10.4	8.3	7.6
Chelan	Lake Chelan	676.1	319.9	481.3	255.7	294.2
		YAKIMA				
Yakima	Keechelus Lake	157.8	82.1	113.8	67.4	97.6
Kachess	Kachess Lake	239.0	148.0	179.2	67.9	173.4
Cle Elum	Lake Cle Elum	436.9	57.6	220.9	361.7	259.7
Bumping	Bumping Lake	33.7	4.0	17.0	9.2	7.8
Tieton	Rimrock Lake	198.0	116.1	170.5	54.6	118.0
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	942.9	1293.9	845.8	1012.6
Skagit	Diablo Reservoir	90.6	84.0	87.6	87.9	84.2
Skagit	Gorge Reservoir	9.8	7.9	7.9	7.1	7.9

1/ Based on Active Storage

* 15-yr. Average 1963-1977

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	FALL Sept-Oct Observed	1981 2/ Departure	WINTER Nov. 1981 - Jan. 1982 Observed	2/ Departure
Columbia in Canada	5.17	+0.15	10.34	+0.06
Pend Oreille - Spokane	3.56	-0.48	11.65	-0.53
Northeastern Washington	3.28	+0.80	6.61	-0.10
Southeastern Washington	3.03	+0.52	8.06	+1.00
East Slope Cascades	4.87	+0.12	21.20	+1.17
North Central Washington	2.61	+1.02	5.01	+0.17
Northwest Slope Cascades	13.88	+0.67	37.63	-0.30
Southwest Slope Cascades	9.98	+1.30	29.04	+0.13

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages.

East Slope Cascades - Yakima, Wenatchee and Chelan Drainages.

North Central Washington - Methow and Okanogan Drainages.

Northwest Slope Cascades - Puget Sound Drainages.

Southwest Slope Cascades - Lower Columbia Drainages.

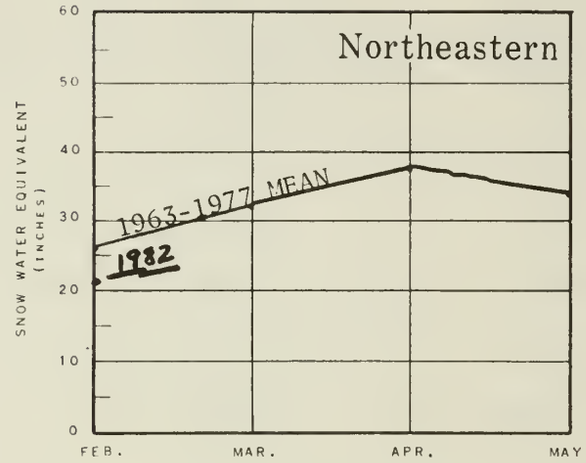
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

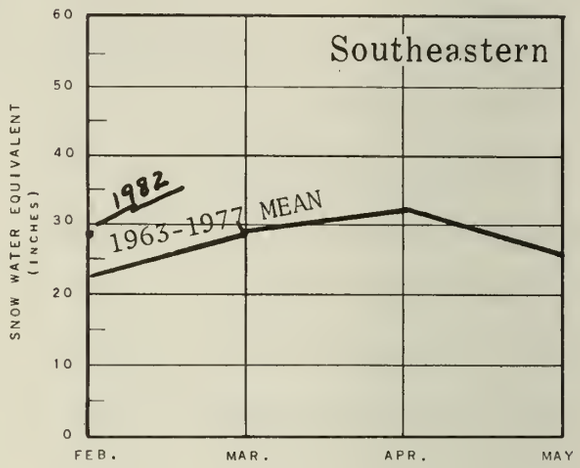
2/ - Departure from 15-year (1958-72) drainage division average.

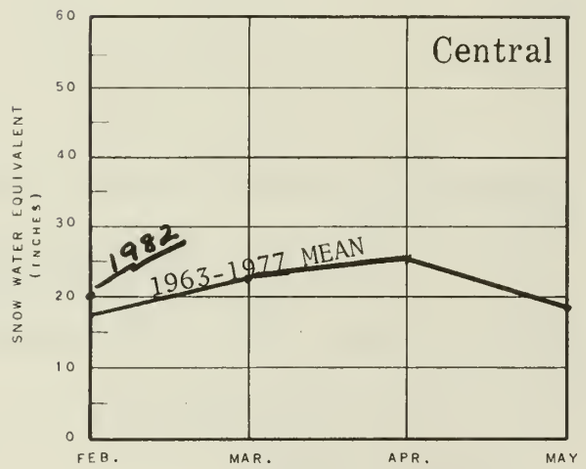
WASHINGTON SNOW COVER

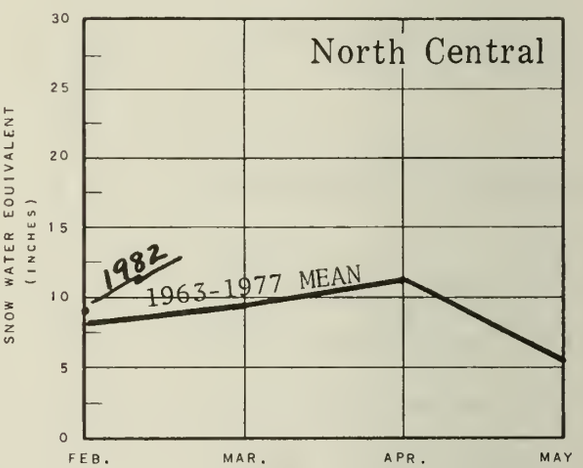
1982

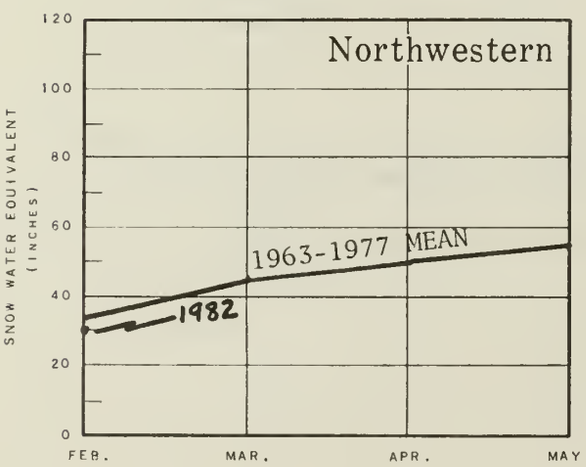
DRAINAGE AREAS

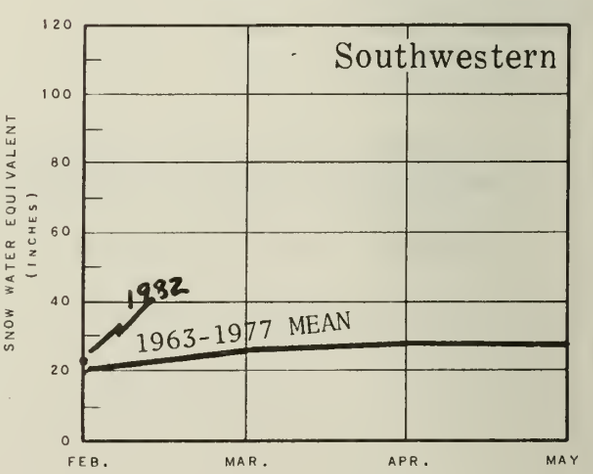












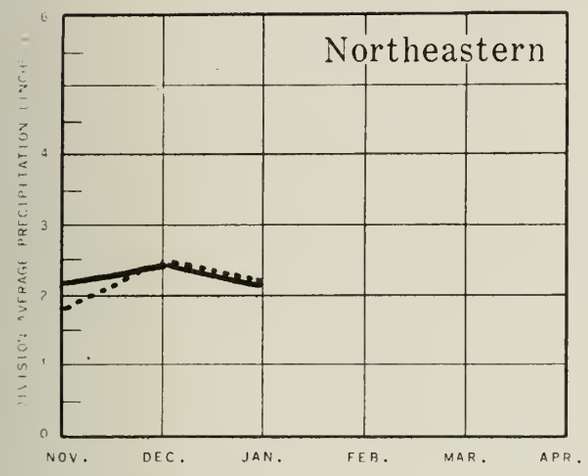
M7-L-22028G

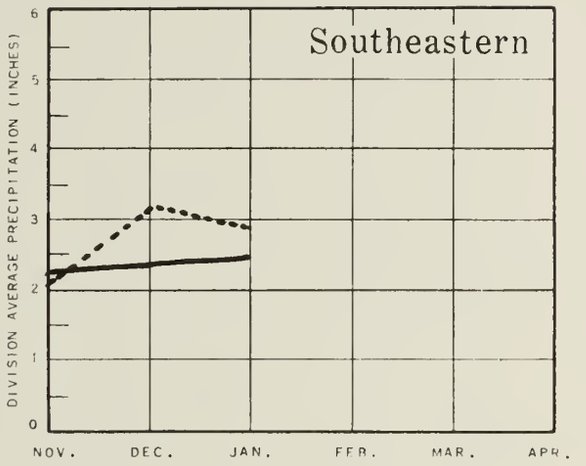
Selected Snow Survey Courses by Soil Conservation Service

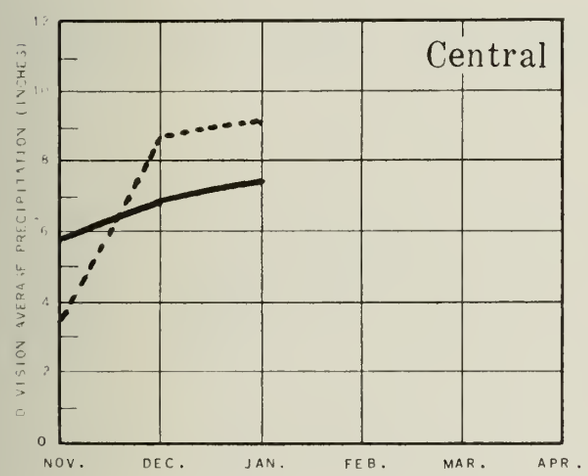
WASHINGTON VALLEY PRECIPITATION

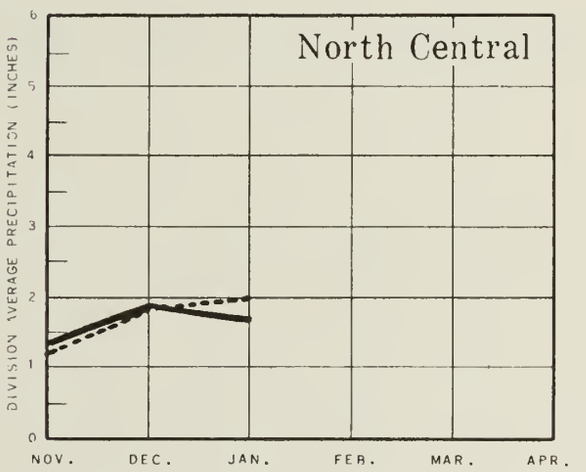
1982

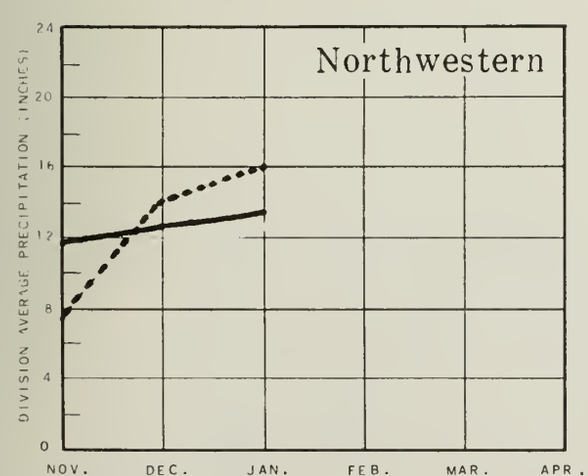
DRAINAGE AREAS

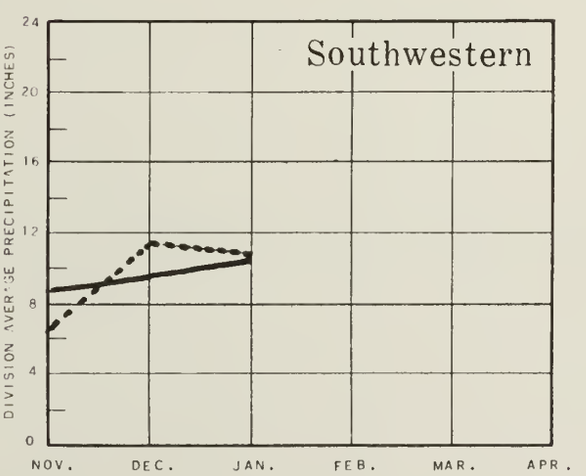






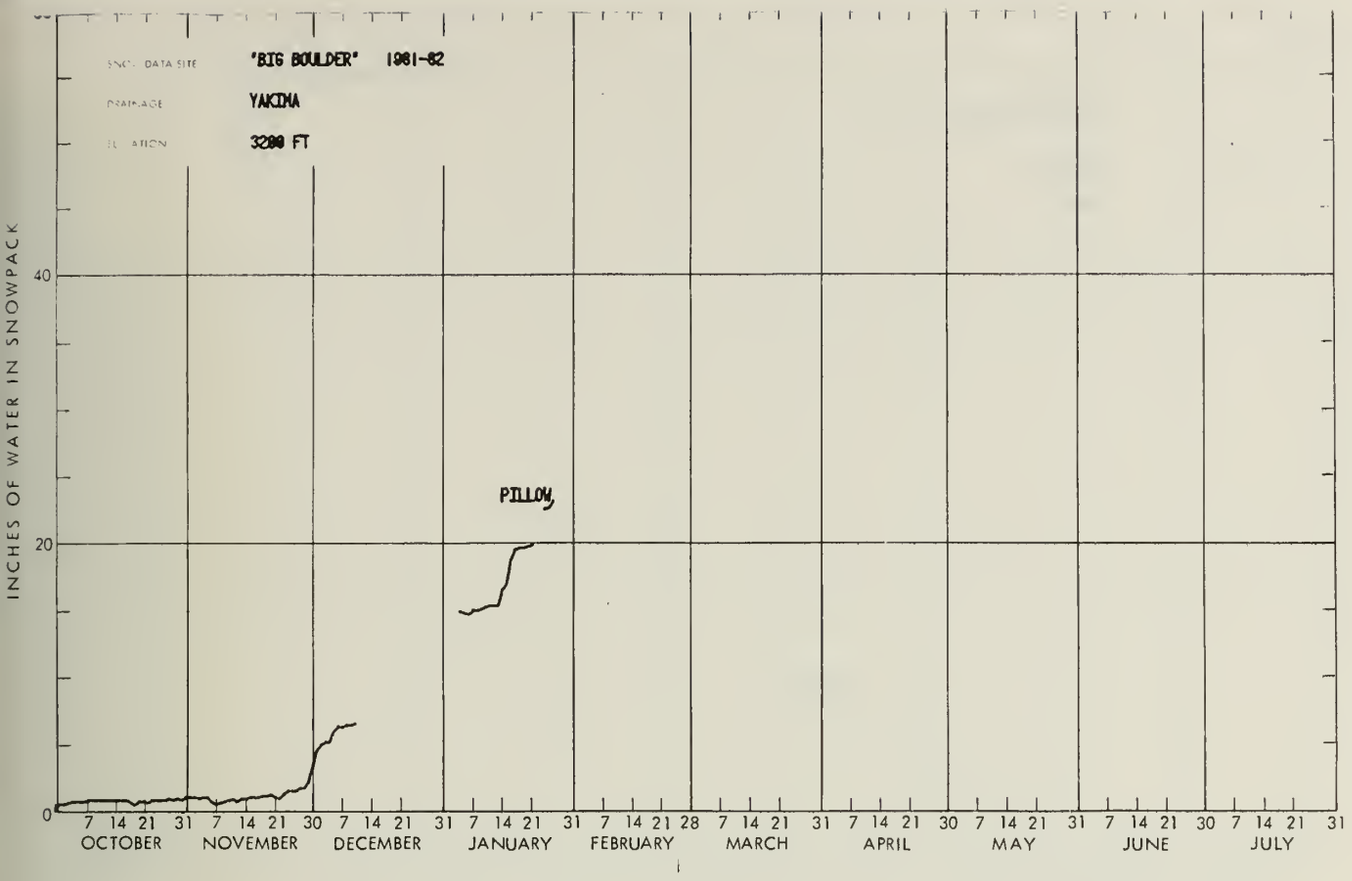


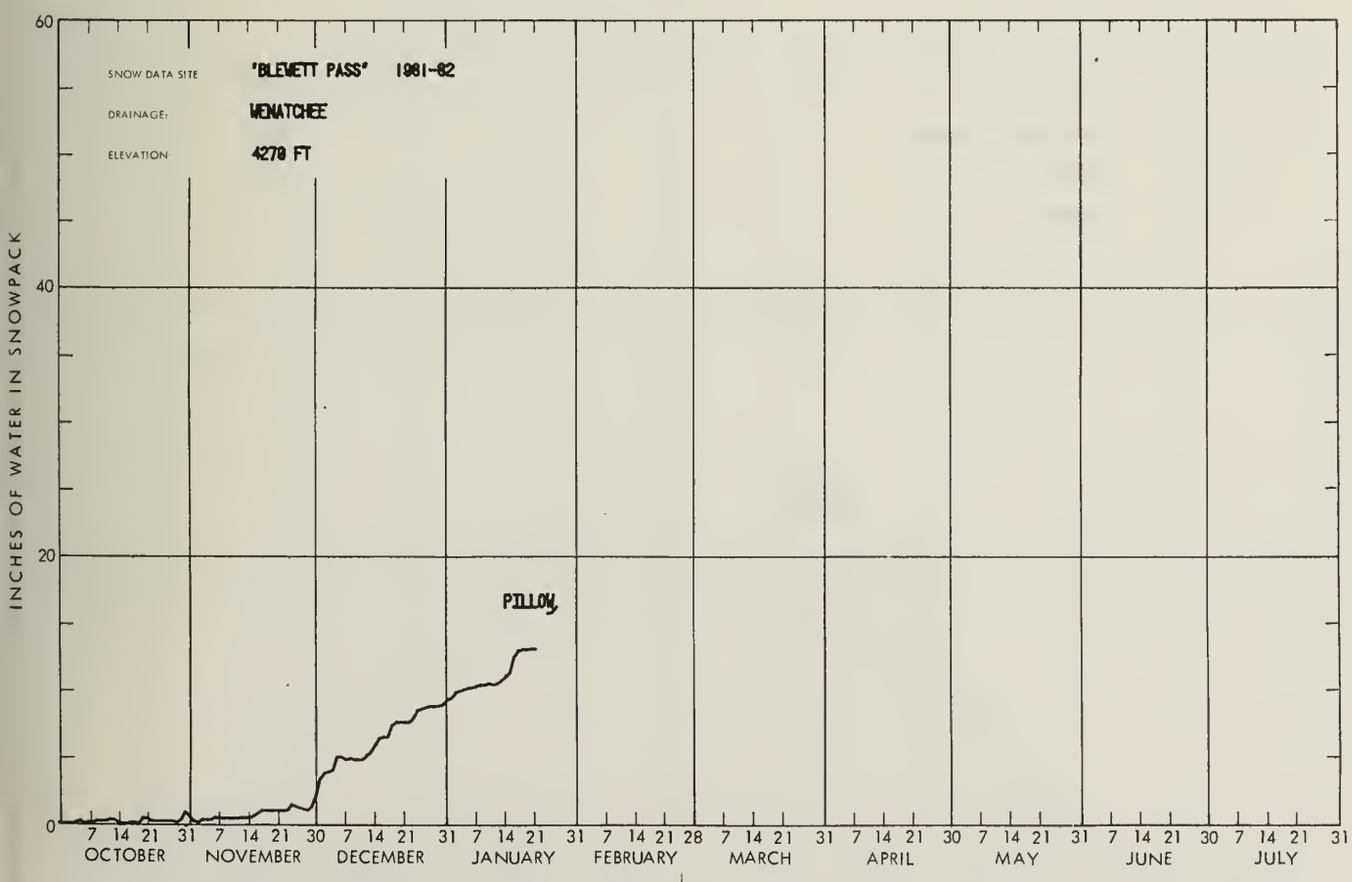


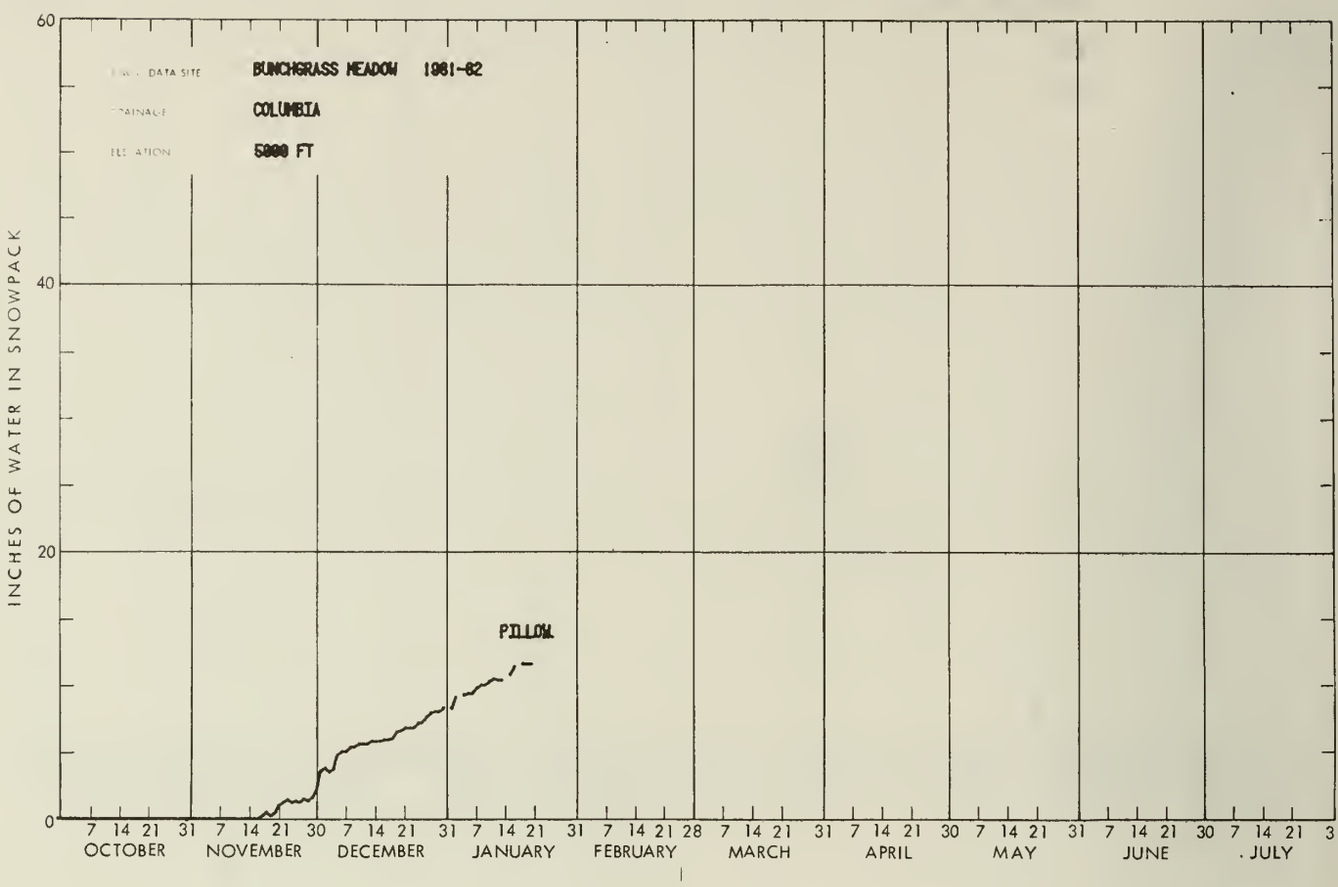


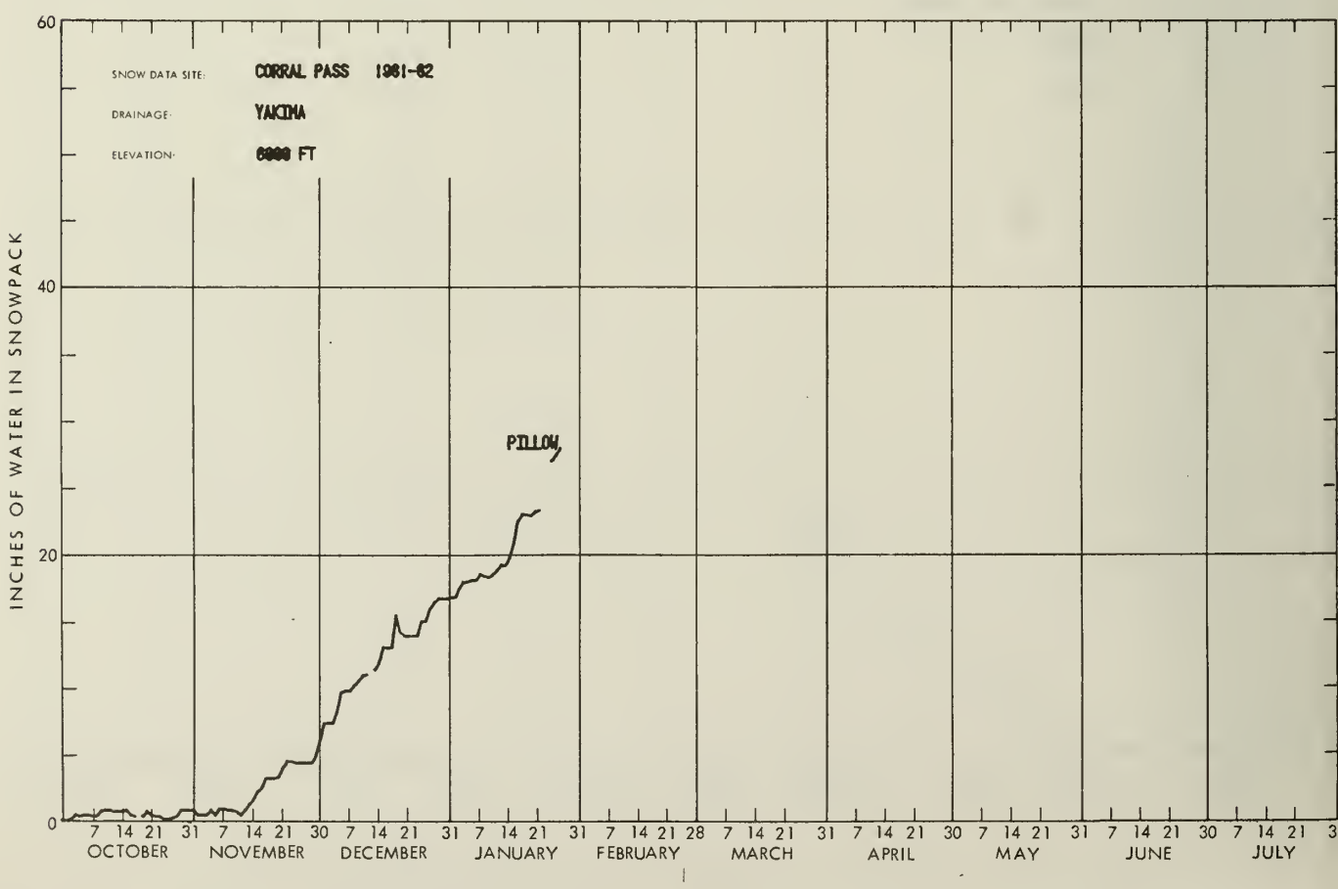
Average: ——
1982 : - - - - - -

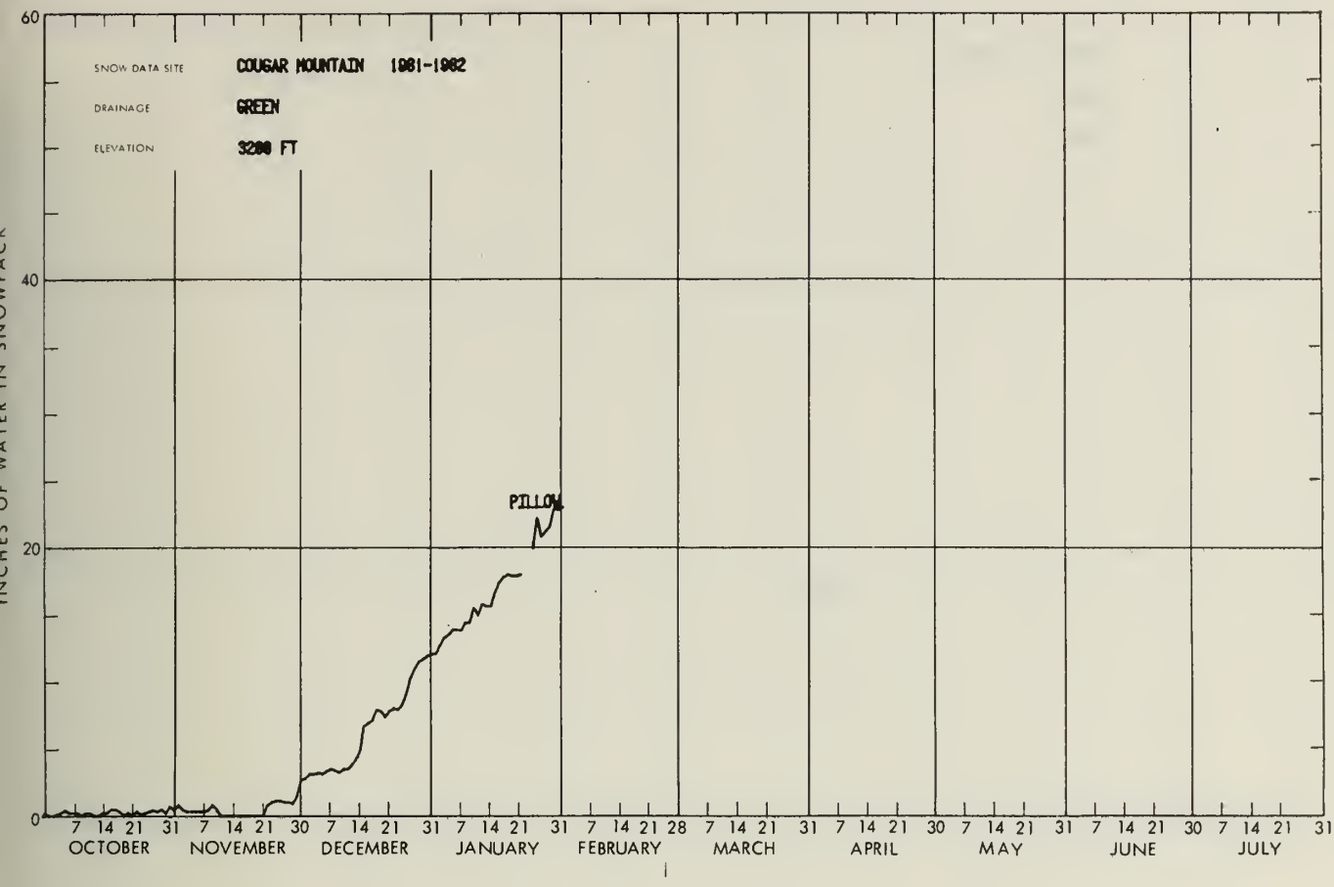
Preliminary Analysis by National Weather Service

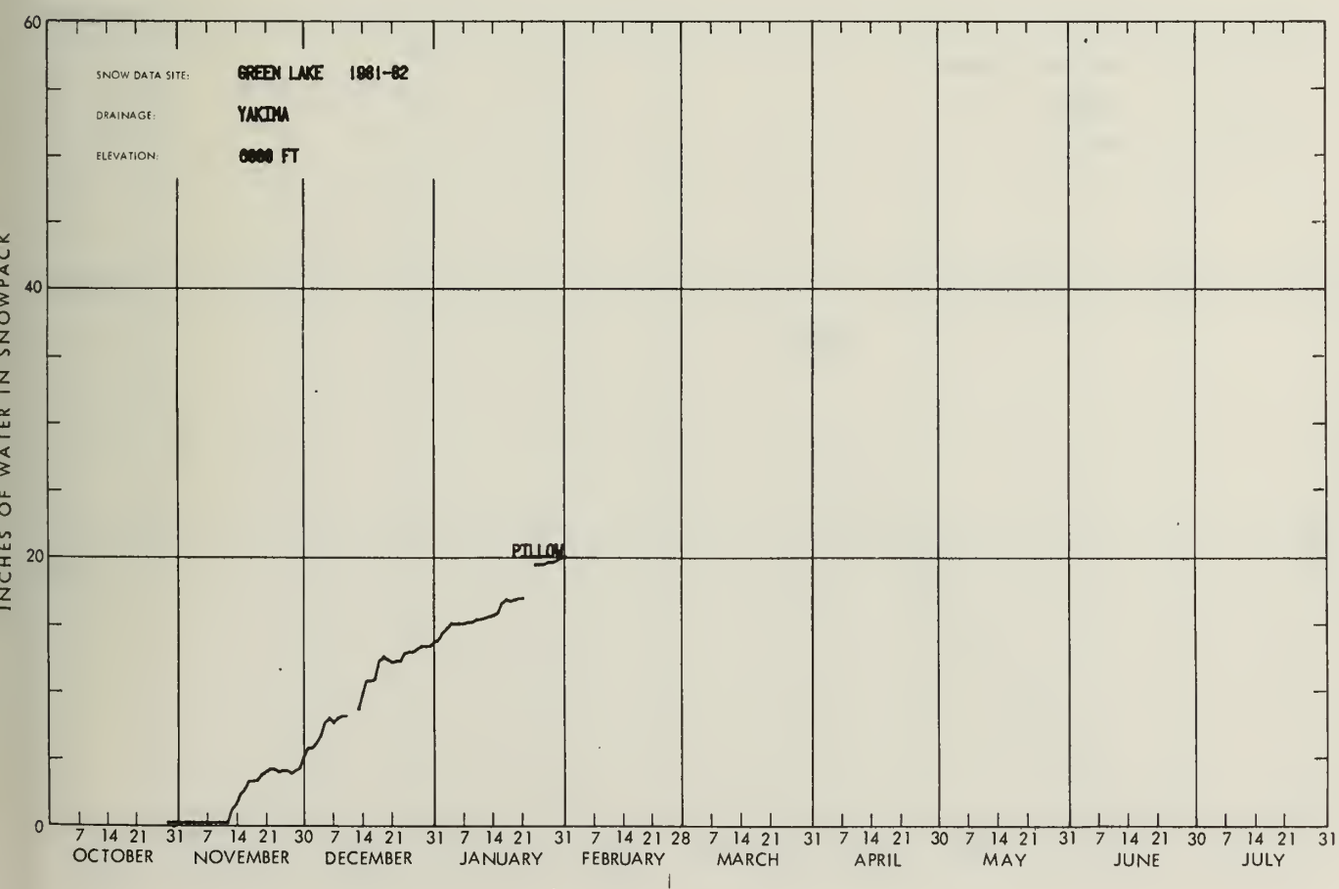

SNOW DATA SITE 'BIG BOULDER' 1981-82
DRAINAGE YAKIMA
ELEVATION 3280 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

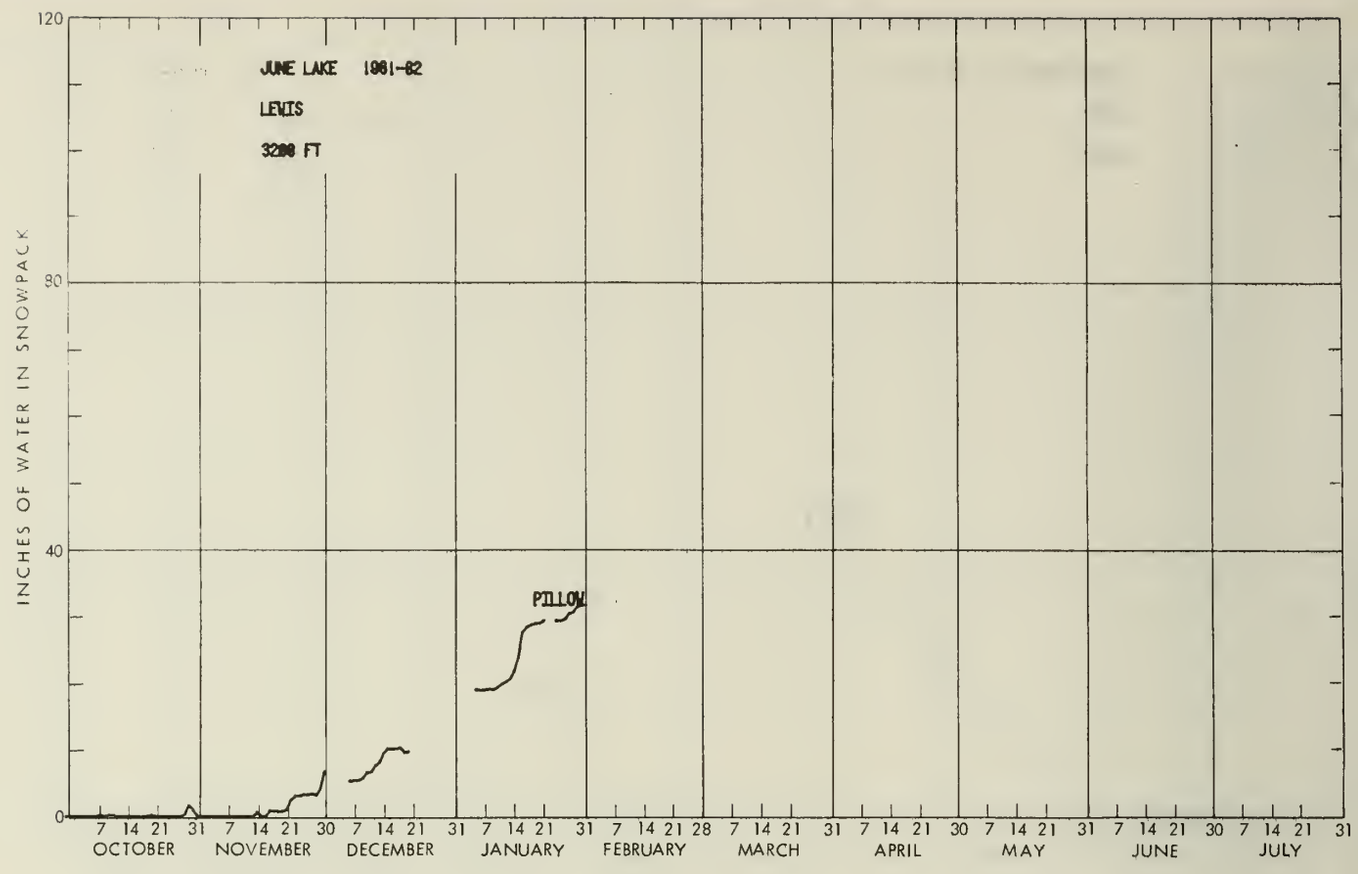

SNOW DATA SITE 'BLEWETT PASS' 1981-82
DRAINAGE WENATCHEE
ELEVATION 4270 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

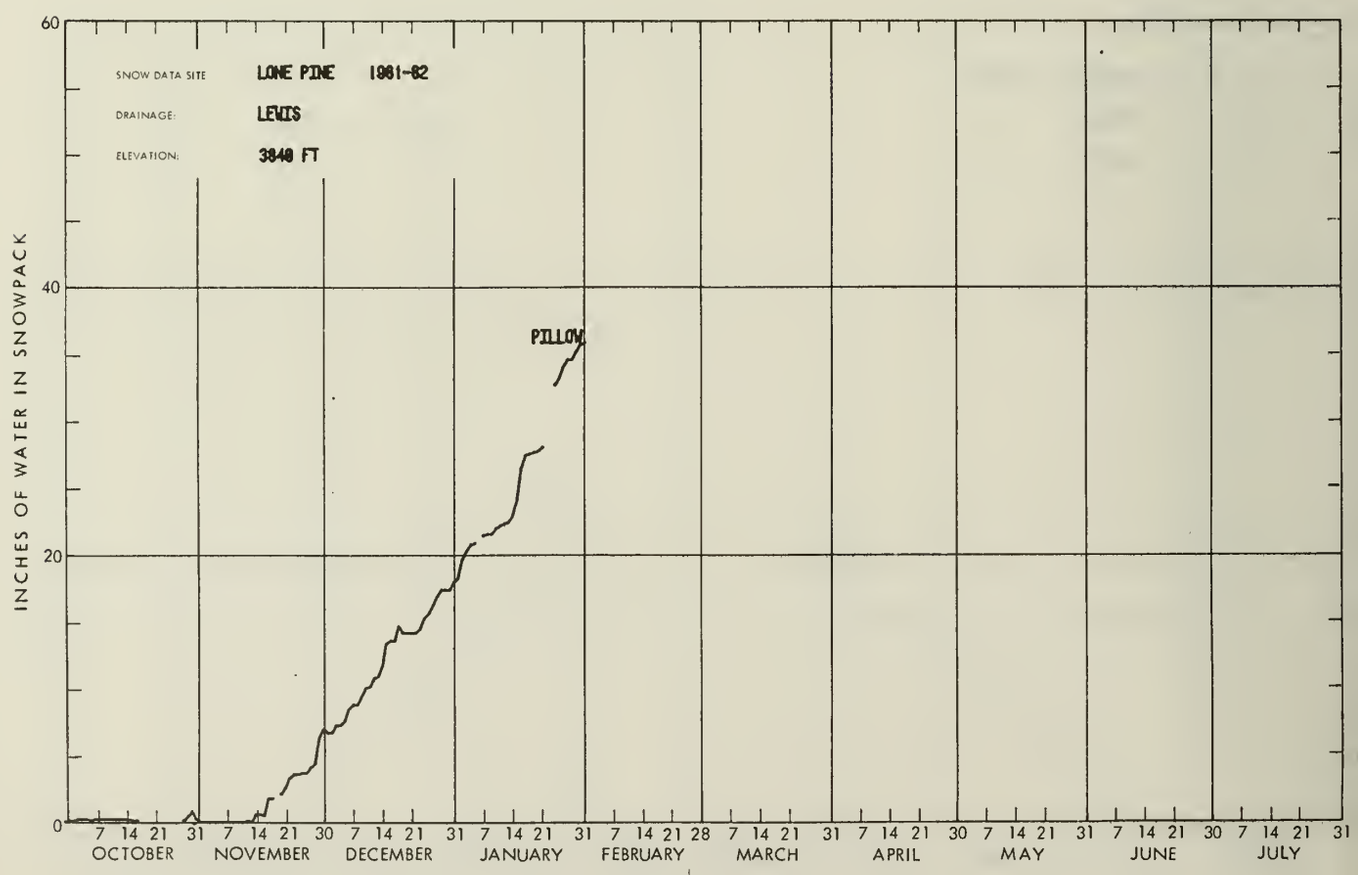

SNOW DATA SITE: BUNCHGRASS MEADOW 1981-82
DRAINAGE: COLUMBIA
ELEVATION: 5000 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 3
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

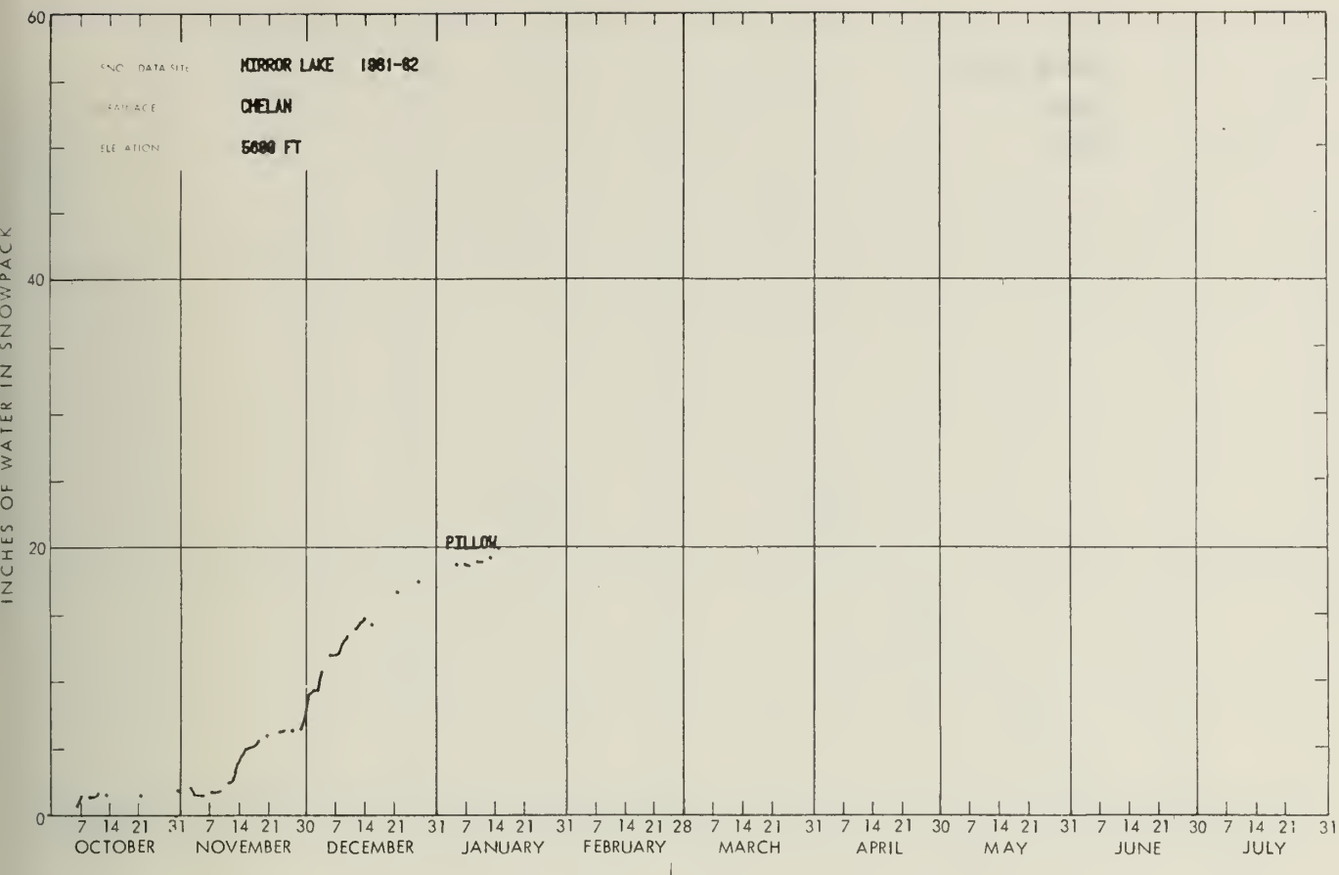

SNOW DATA SITE: CORRAL PASS 1981-82
DRAINAGE: YAKIMA
ELEVATION: 6000 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 3
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

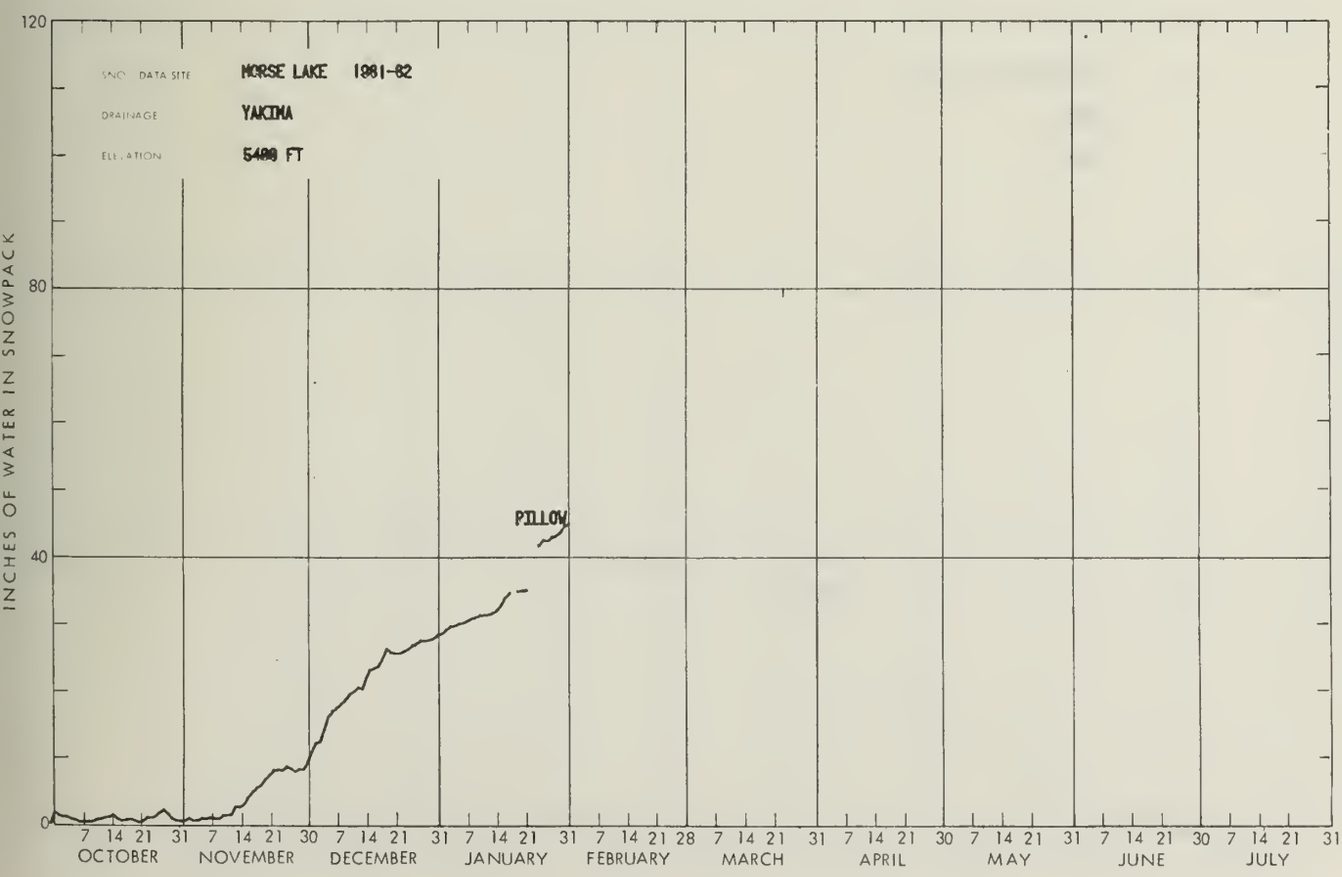

SNOW DATA SITE COUGAR MOUNTAIN 1981-1982
DRAINAGE GREEN
ELEVATION 3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

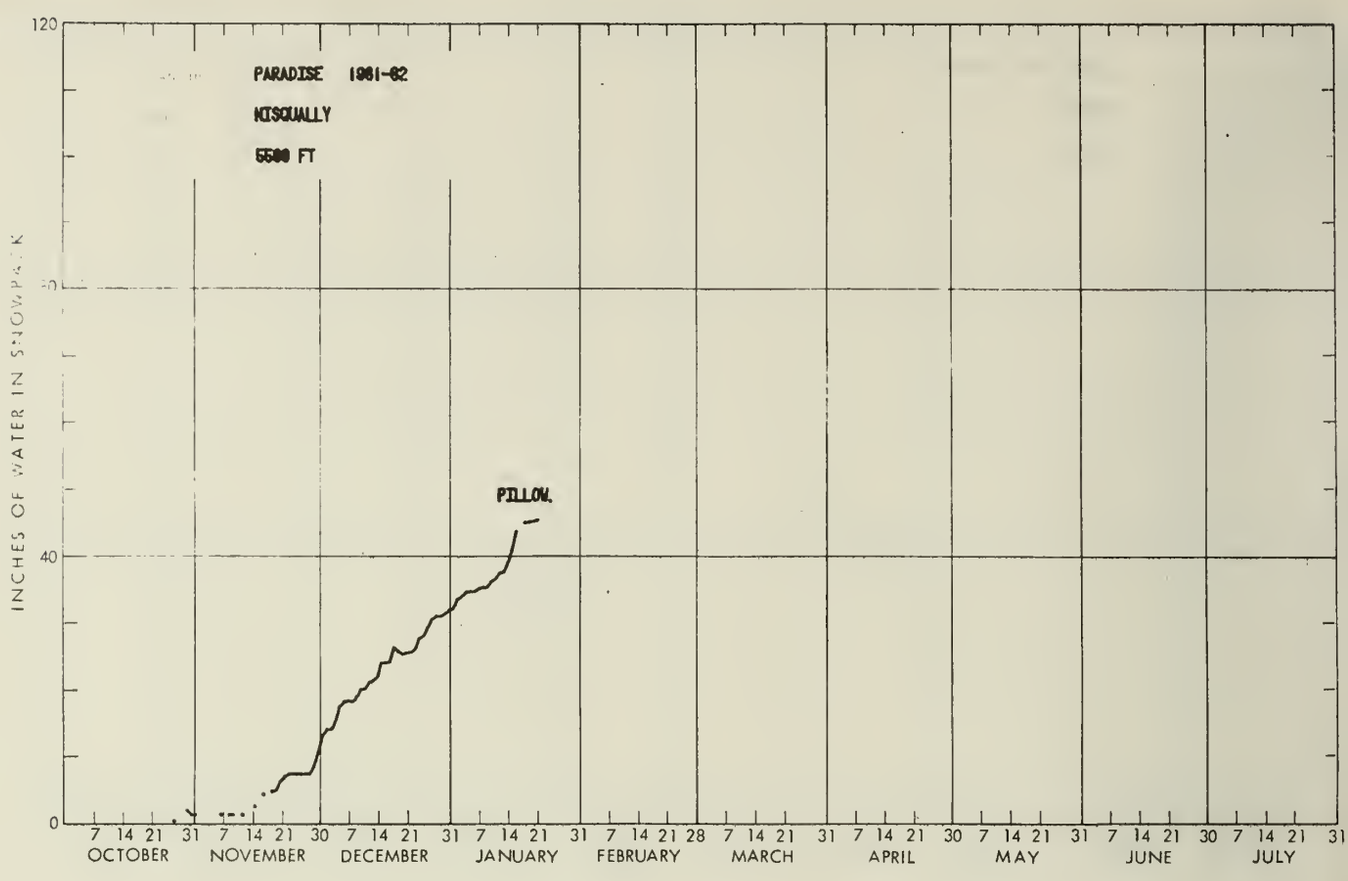

SNOW DATA SITE: GREEN LAKE 1981-82
DRAINAGE: YAKIMA
ELEVATION: 6000 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

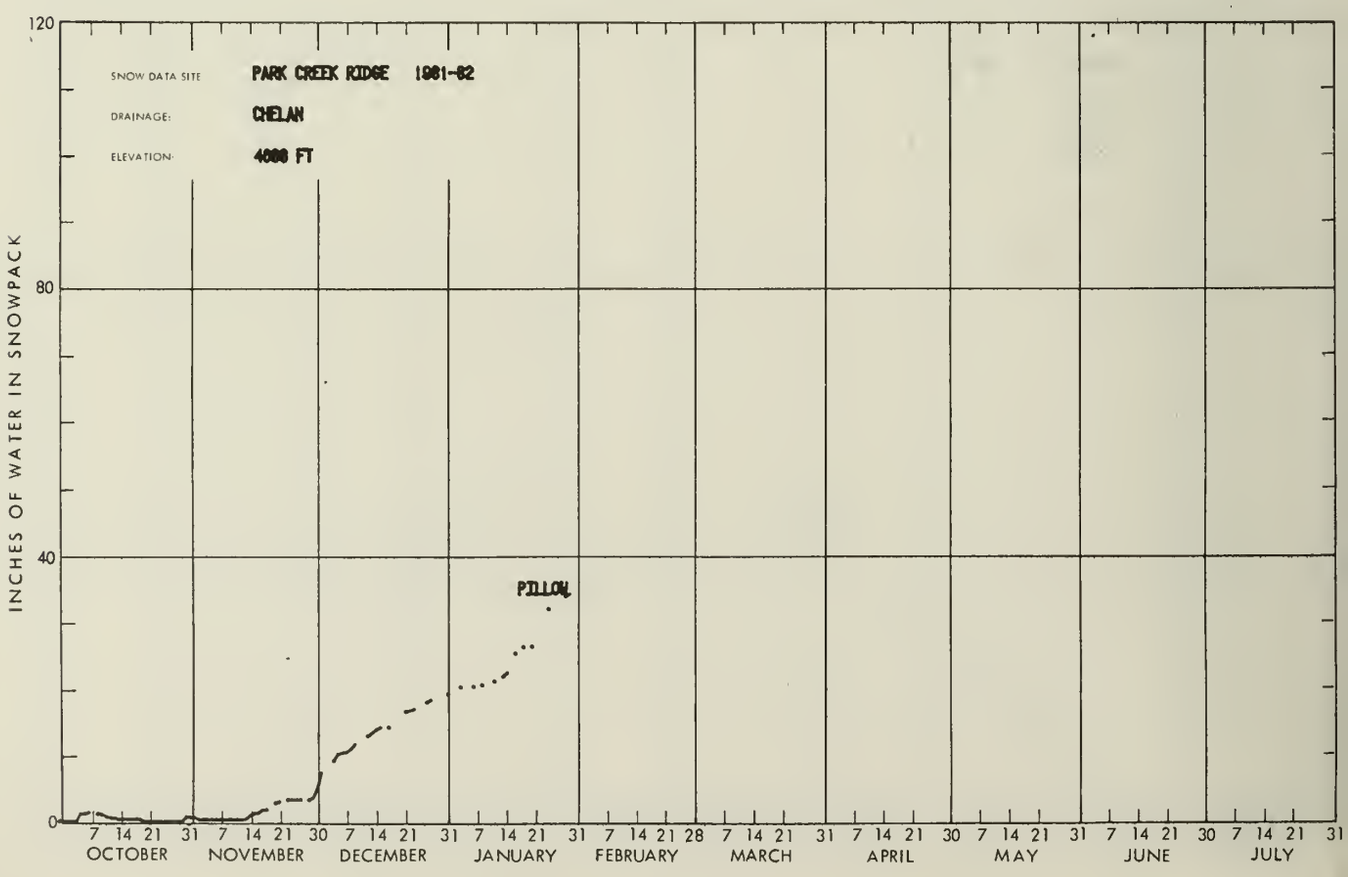

JUNE LAKE 1981-82
LEWIS
3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

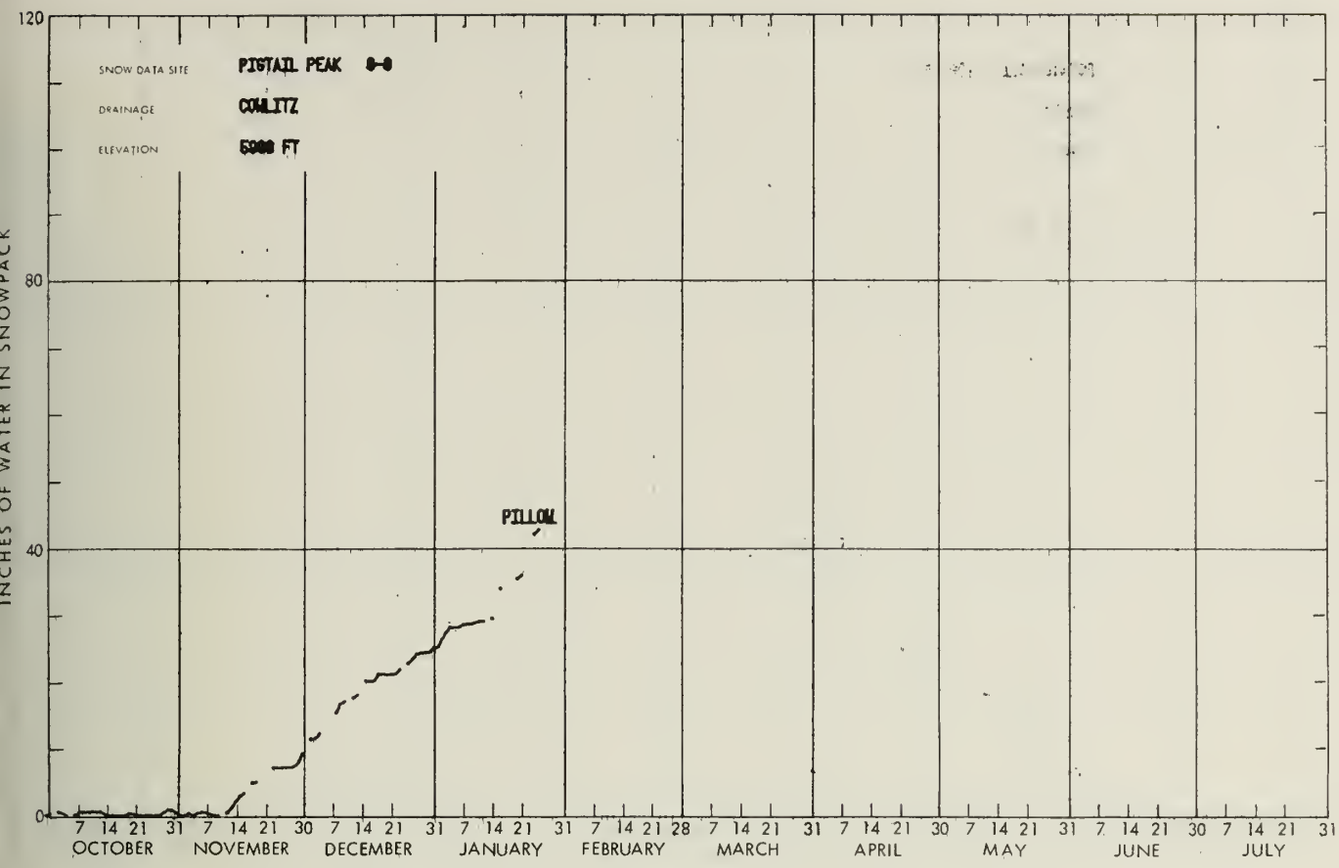

SNOW DATA SITE LONE PINE 1981-82
DRAINAGE: LEWIS
ELEVATION: 3840 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

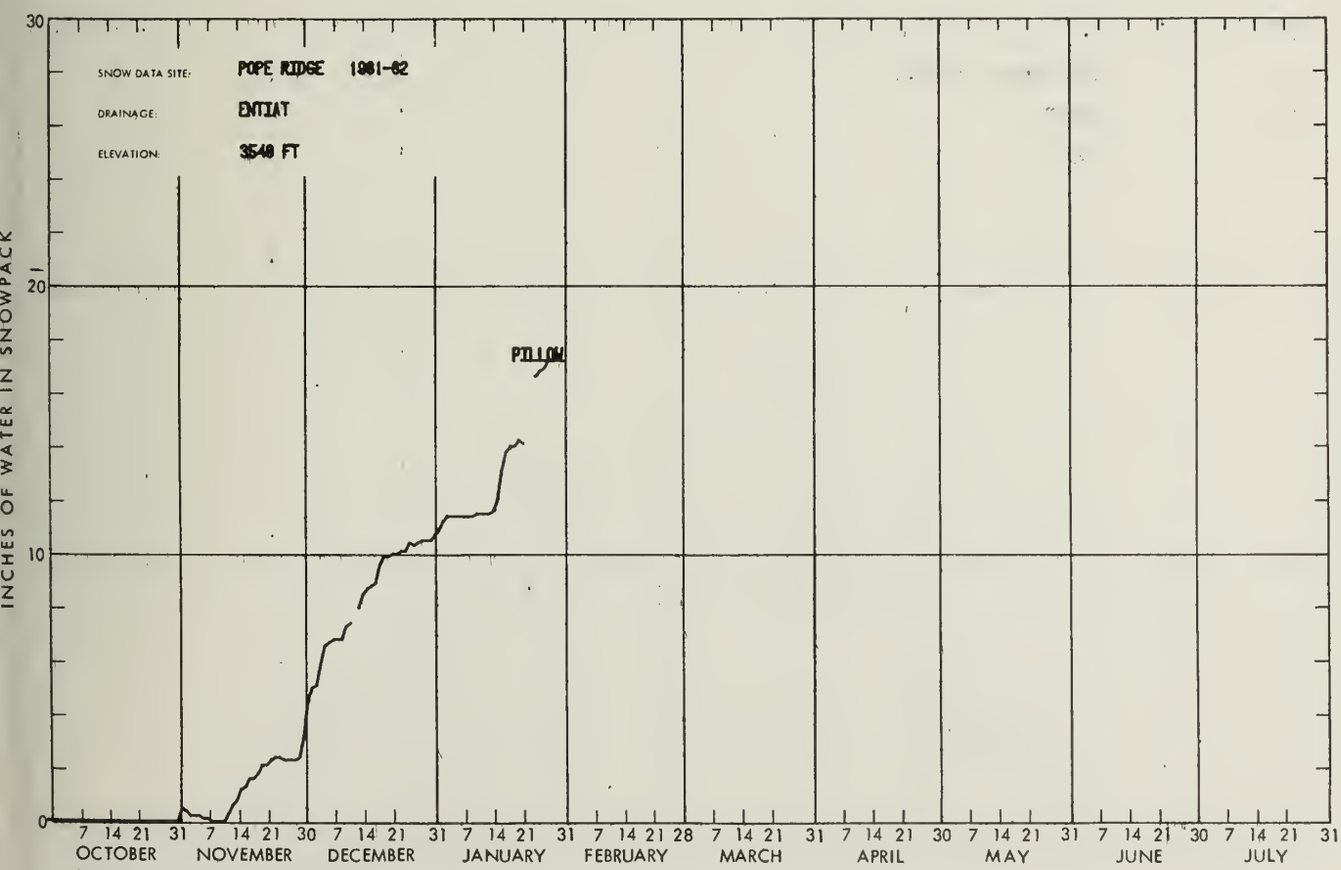

SNO DATA SITE MIRROR LAKE 1961-62
DRAINAGE CHELAN
ELEVATION 5600 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

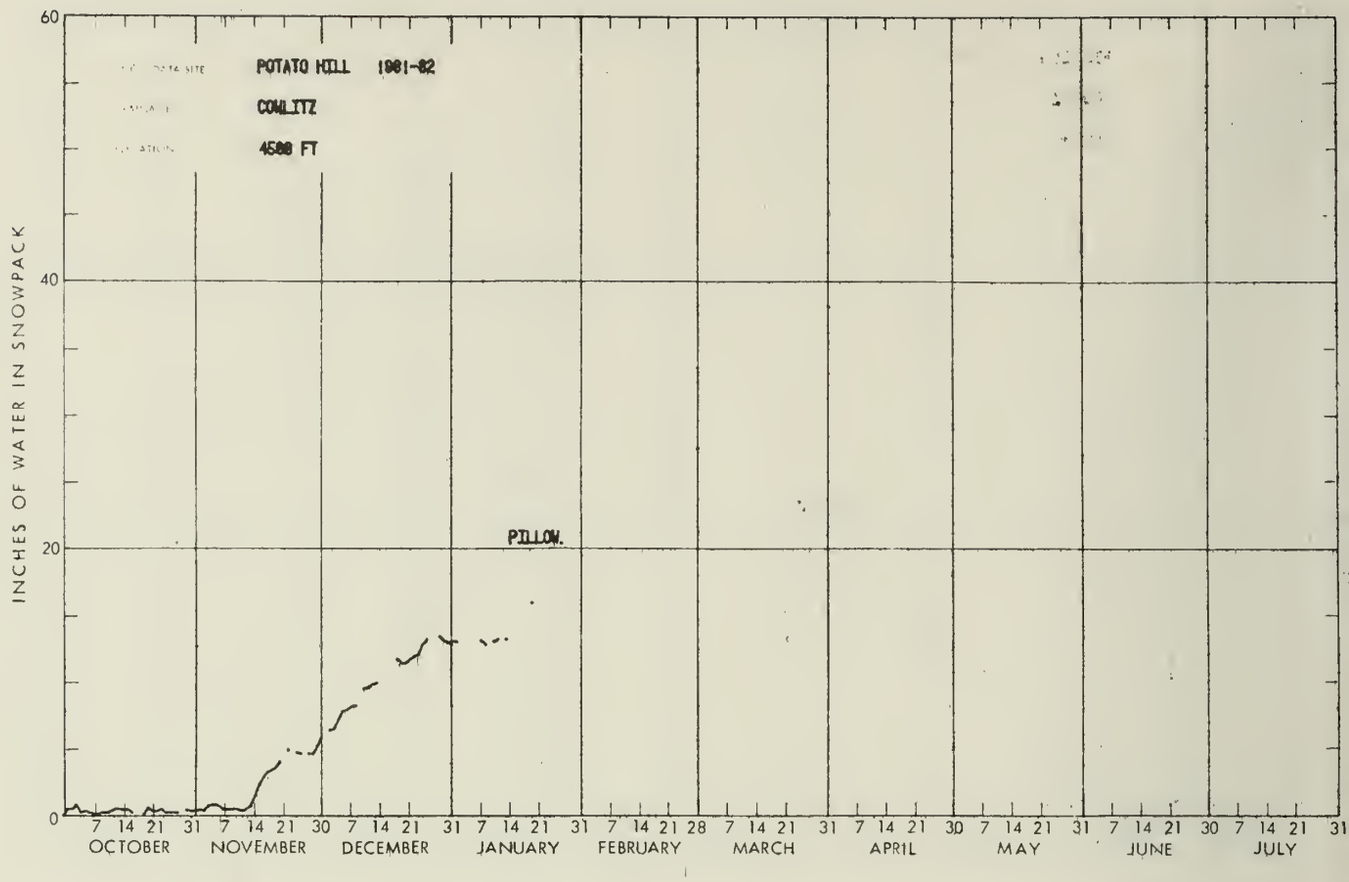

SNO DATA SITE MORSE LAKE 1961-62
DRAINAGE YAKIMA
ELEVATION 5400 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

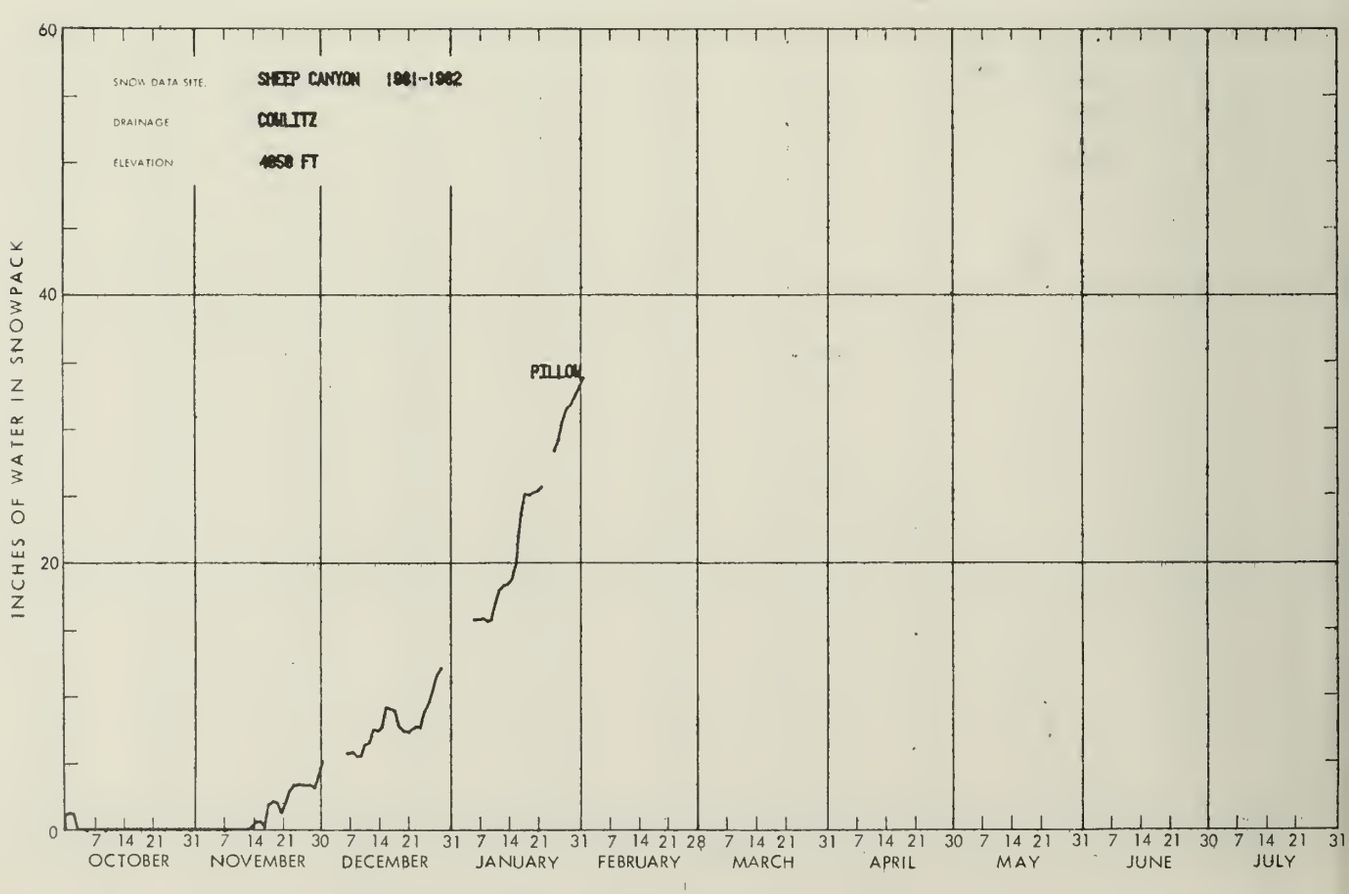

PARADISE 1961-62
NISQUALLY
5500 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

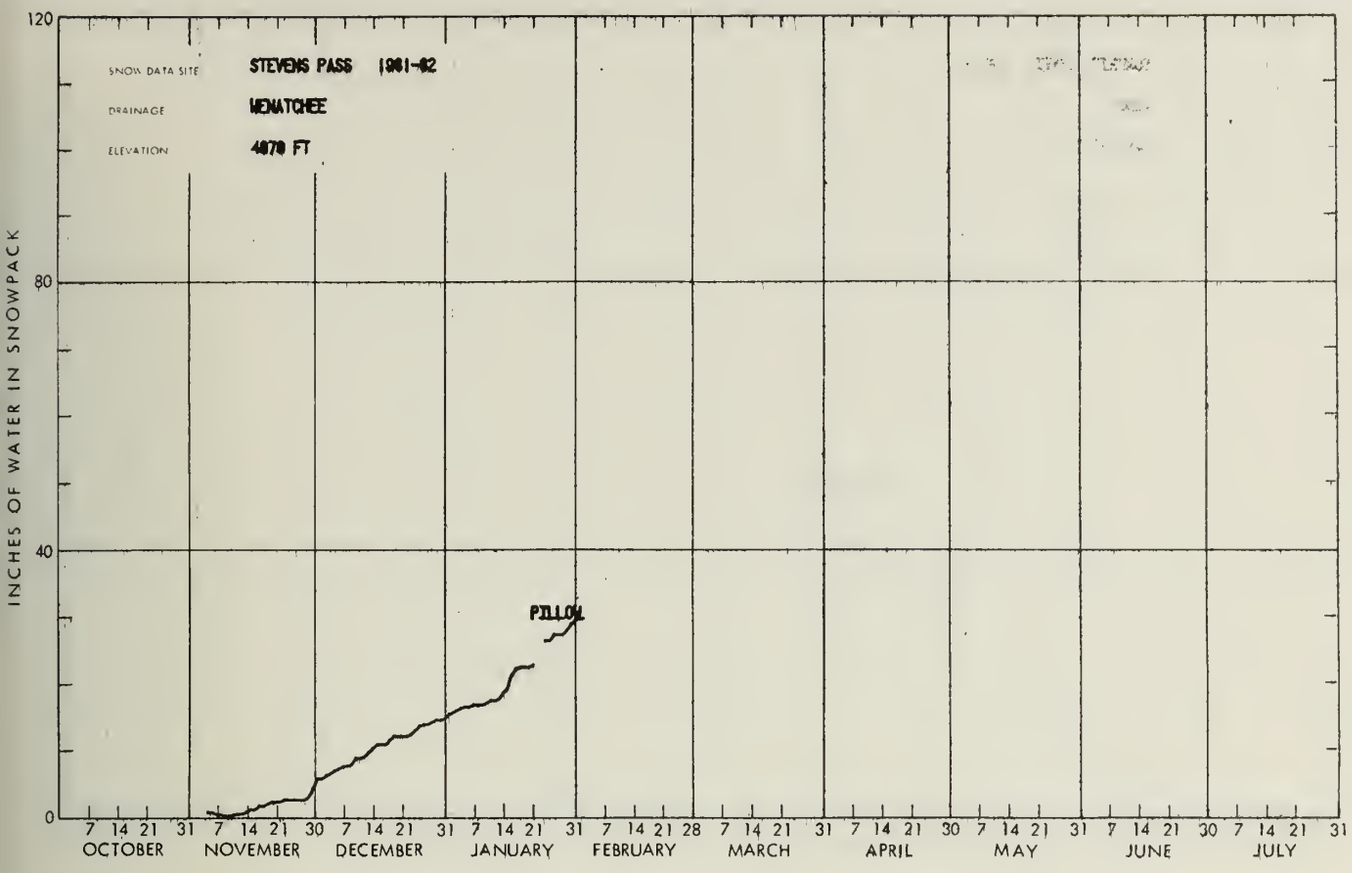

SNOW DATA SITE
PARK CREEK RIDGE 1961-62
DRAINAGE:
CHELAN
ELEVATION:
4000 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

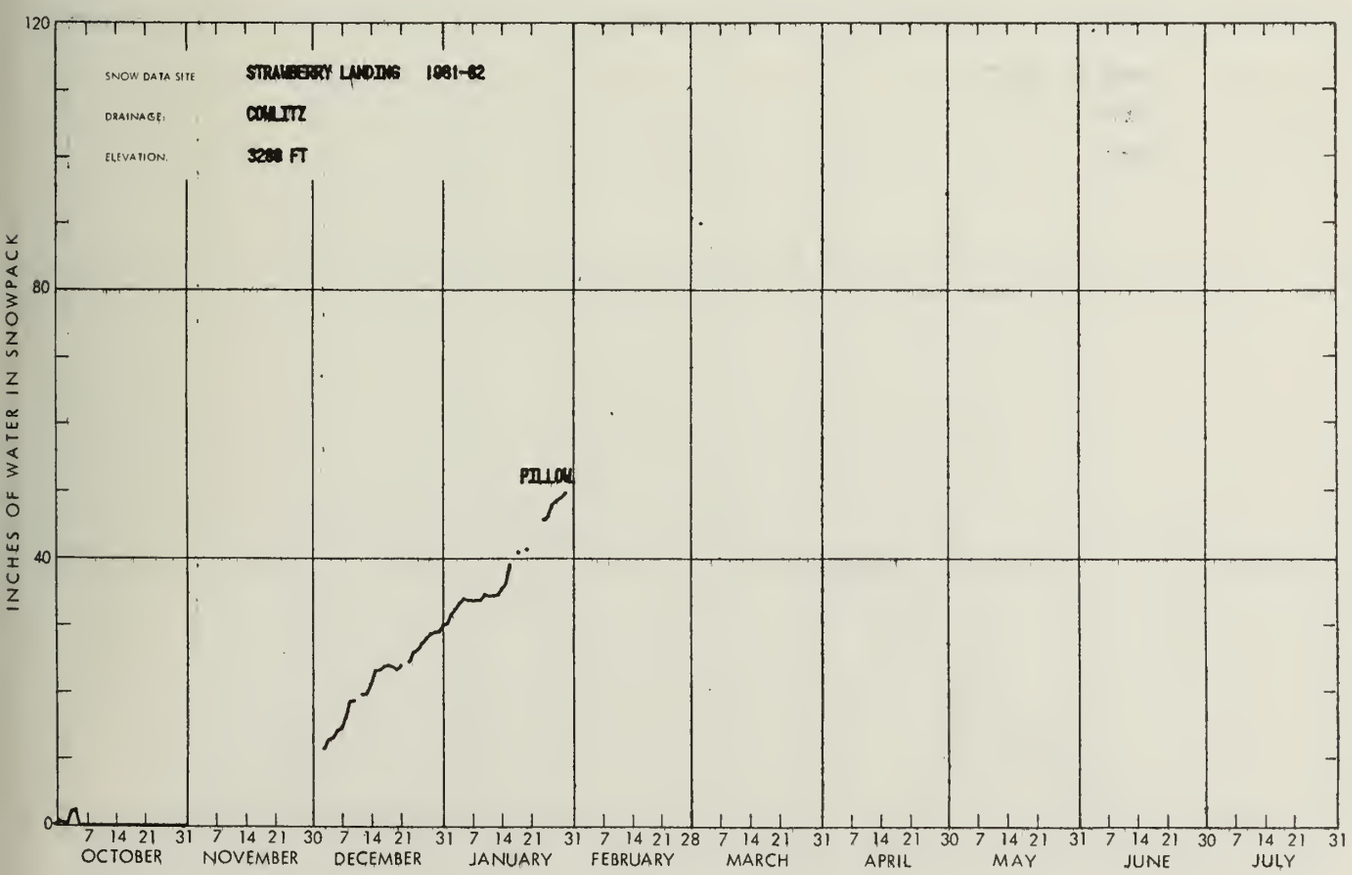

SNOW DATA SITE PIGTAIL PEAK 8-8
DRAINAGE COMLITZ
ELEVATION 5900 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

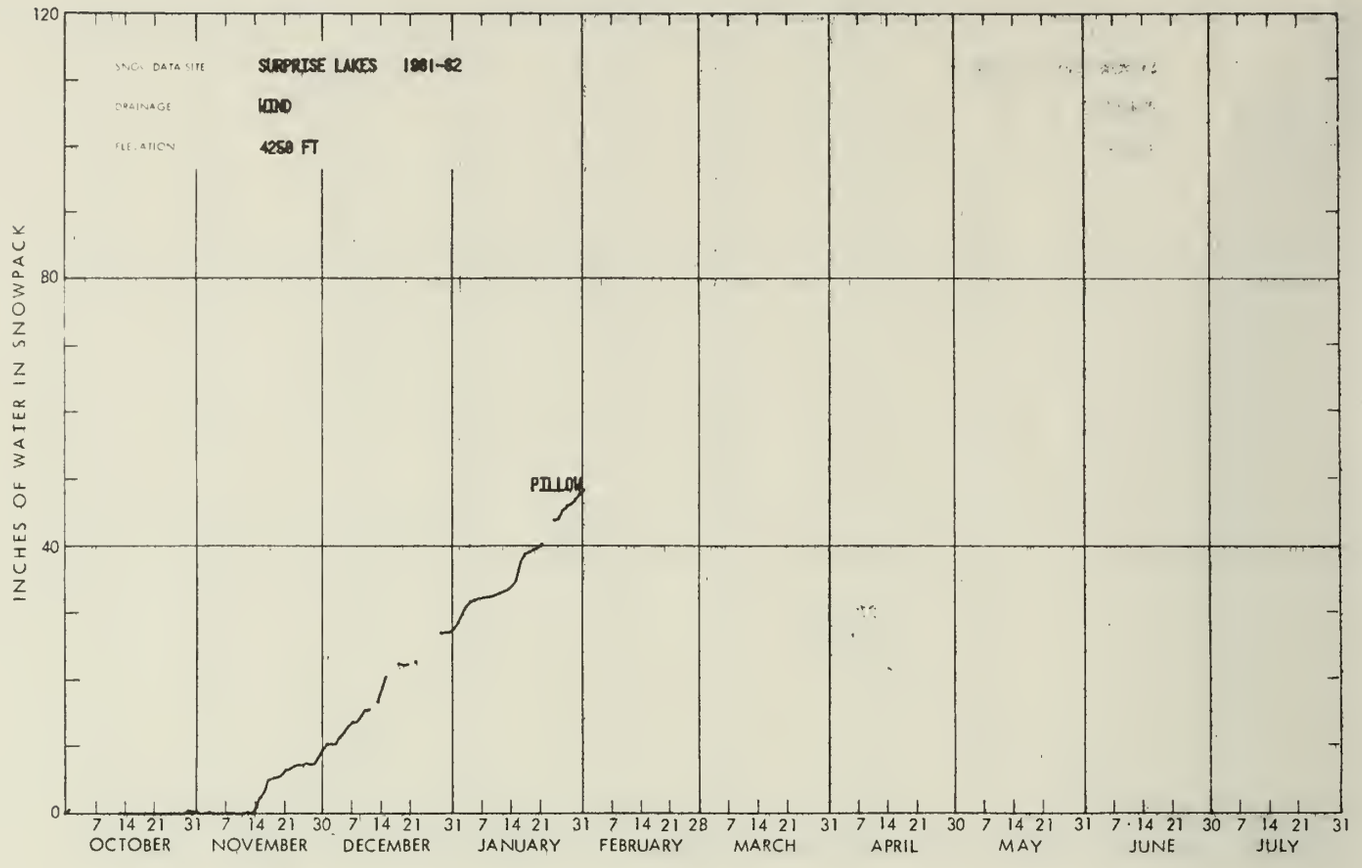

SNOW DATA SITE: POPE RIDGE 1981-82
DRAINAGE: ENTIAT
ELEVATION: 3540 FT
PILLOW
INCHES OF WATER IN SNOWPACK
30
20
10
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

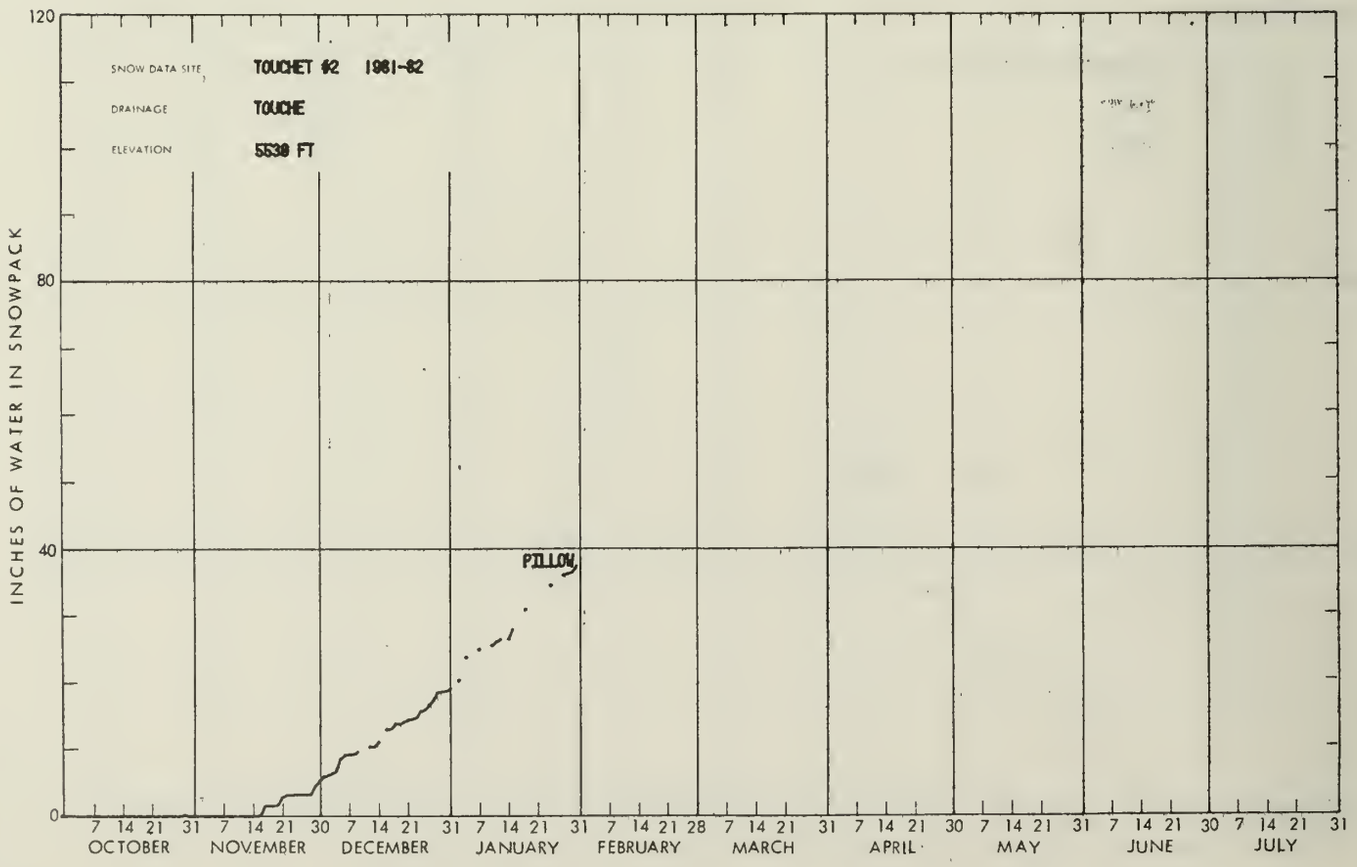

POTATO HILL 1981-82
COWLITZ
4500 FT
PILLOW.
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

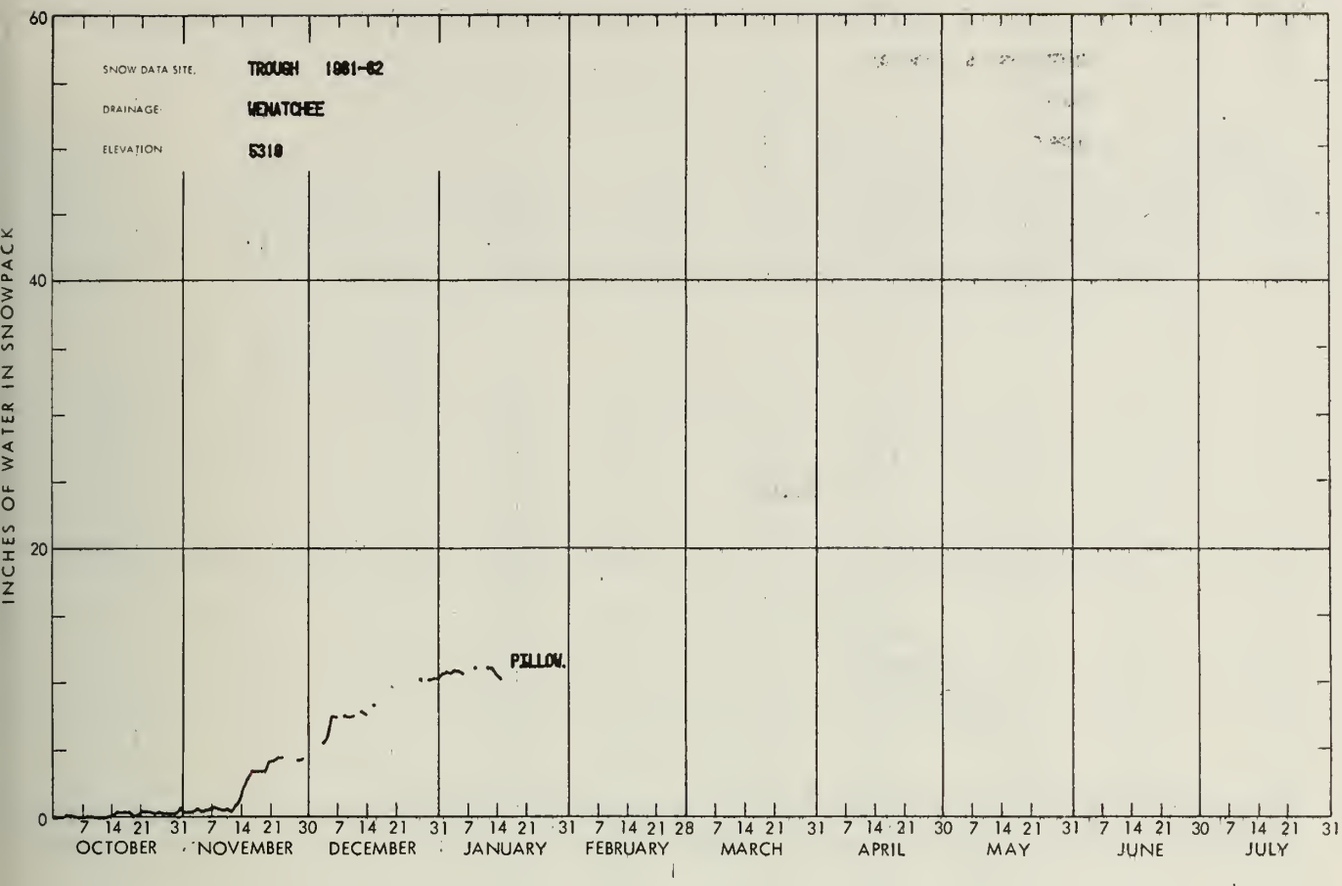

SNOW DATA SITE
SHEEP CANYON 1981-1982
DRAINAGE
COWLITZ
ELEVATION
4850 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
STEVENS PASS 1981-82
DRAINAGE
WENATCHEE
ELEVATION
4070 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
STRAWBERRY LANDING 1981-82
DRAINAGE
COWLITZ
ELEVATION
3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
SURPRISE LAKES 1981-82
DRAINAGE
WIND
ELEVATION
4250 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
TOUCHET #2 1981-82
DRAINAGE
TOUCHE
ELEVATION
5530 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE: TROUGH 1981-82
DRAINAGE: WENATCHEE
ELEVATION: 5310
PILLOW.
INCHES OF WATER IN SNOWPACK
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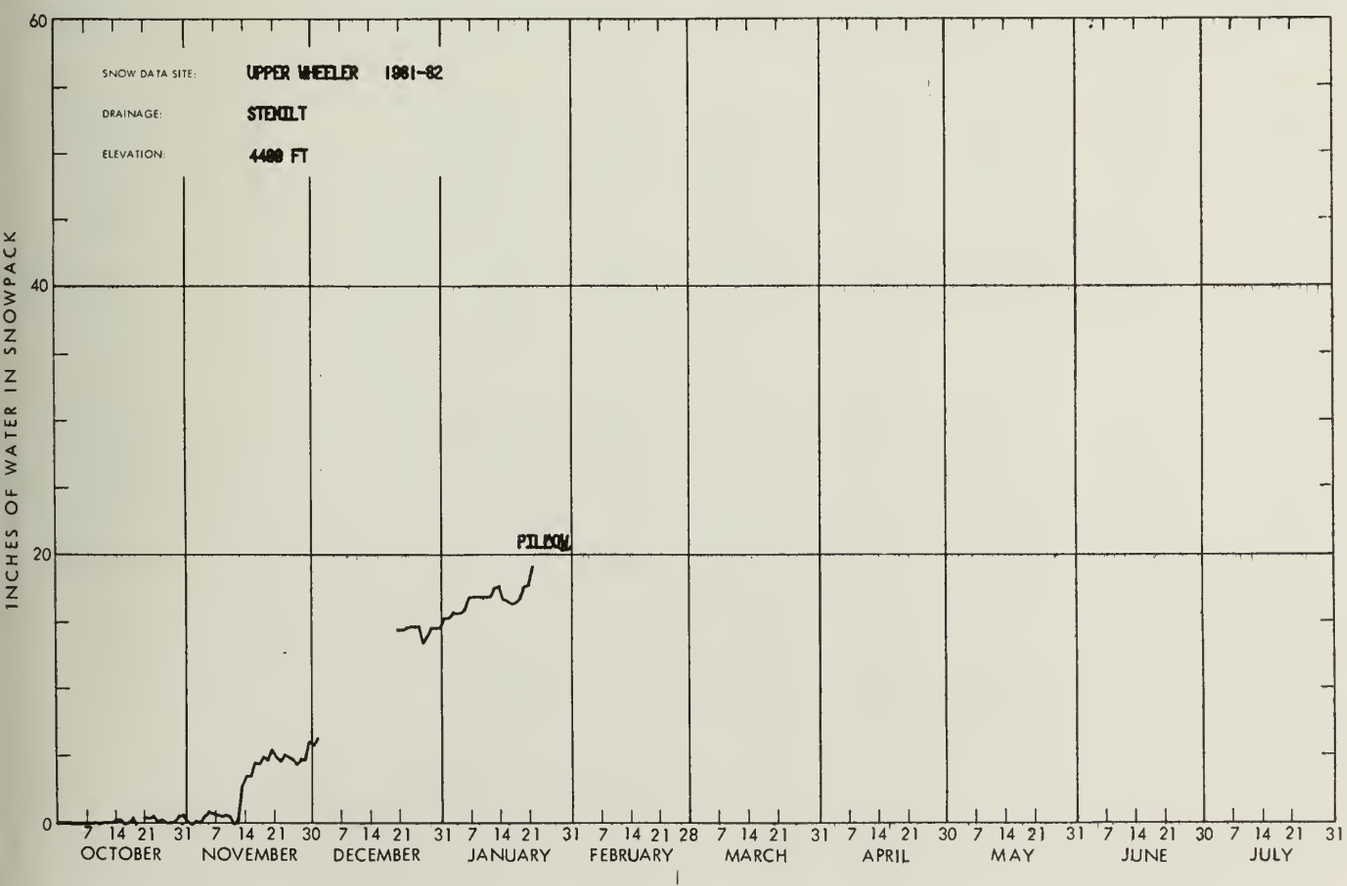
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY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DRAINAGE: STEMILT
ELEVATION: 4480 FT
PILLOW
INCHES OF WATER IN SNOWPACK
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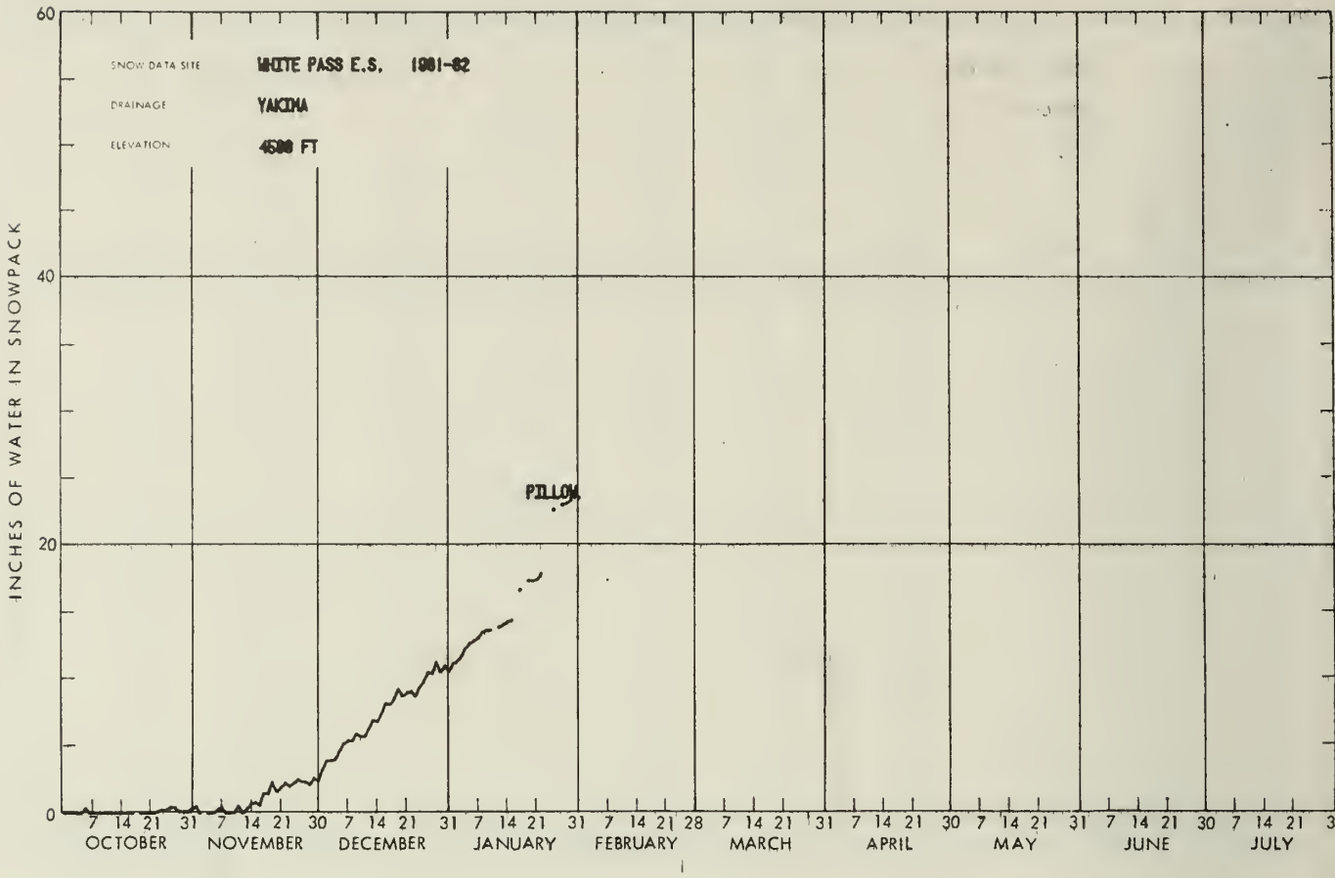
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
WHITE PASS E.S. 1981-82
DRAINAGE
YAKIMA
ELEVATION
4500 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 3
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Water Content (inches) Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Benton Meadow	16A02	2344	12/30	10	1.2	0.0	2.7
			1/28	25	5.9	0.0	5.2
Benton Spring	16A03	4900	12/30	25	5.9	6.3	7.5
			1/29	44	12.1	5.5	13.2
Chewelah	17A04	4925	1/30	38	10.0	5.7	11.5
Heart Lake Trail	14C10	4800	1/1	Not Measured		3.1	9.7
			1/27	68	16.3	3.6	12.8
Hoodoo Basin	15C10	6000	1/8	88	24.6	16.0	22.2
			1/27	120	37.2	20.4	39.7
Hoodoo Creek	15C01	5900	1/1	Not Measured		15.2	19.8
			1/27	114	33.0	16.6	37.2
Lookout	15B02	5250	12/30	48	12.2	8.0	13.8
			1/28	83	21.8	10.8	25.6
Nelson	2D04-Can	3050	12/30	20	4.1	10.0	7.3*
			2/1	48	12.7	9.0	10.9*
Schweitzer Bowl	16A06	4500	12/30	46	13.8	10.2	13.8
			1/29	70	21.8	-	23.1
Schweitzer Ridge	16A05	6100	12/30	56	18.0	19.2	21.3
			1/29	87	31.5	20.1	34.2
Winchester Creek	17A03	2970	1/27	32	7.2	1.2	9.1
KETTLE RIVER							
Barnes Creek	2B06-Can	5300	12/29	27	5.7	9.7	8.8*
			2/2	67	15.3	10.0	13.3*
Big White Mtn.	2E03-Can	5500	1/31	57	14.5	-	13.4*
Boulder Road	18A02	1450	1/4	11	1.9	2.4	2.3
			1/27	22	5.3	1.2	3.9
Butte Creek	18A03	4070	1/4	24	3.4	3.3	4.0
			1/27	31	7.0	3.8	6.9
Cabin Creek	18A08	3170	1/4	19	3.3	3.7	3.7
			1/27	28	6.8	4.8	6.0
Carmi	2E02-Can	4100	2/1	27	5.5	2.4	5.0*
Farron # 1	2B02-Can	4000	1/28	46	11.4	6.7	9.3*
Farron # 2	2B02A-Can	4000	1/28	44	11.3	7.0	8.1*
Goat Creek	18A04	3595	1/4	21	3.1	3.5	3.3
			1/27	29	6.2	3.7	5.4
Monashee Pass	2E01-Can	4500	12/29	19	3.6	7.3	6.4*
			2/2	50	11.3	7.6	9.4*
Snow Caps Creek	18A05	2150	1/4	12	2.1	3.0	2.5
			1/27	22	5.8	2.6	4.1
Snow Caps Trail	18A06	2720	1/4	16	3.1	3.2	2.9
			1/27	25	5.0	3.8	4.8

\# Average based on 1963-1977 Average
* Average for years of record

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
KETTLE RIVER (Cont.)							
Summit G.S.	18A07	4600	1/4	17	3.0	2.8	3.5
			1/27	25	5.6	2.2	5.9
Trapping Creek Lower	2E05-Can	3050	1/31	26	4.7	2.0	4.1*
Trapping Creek Upper	2E04-Can	4450	1/30	40	8.5	3.4	7.0*
COLVILLE RIVER							
Baird	17A06	3215	1/29	29	6.3	3.1	5.5
Carlson	18A09	2885	1/30	17	4.2	0.0	3.7
Chewelah	17A04	4925	1/30	38	10.0	5.7	11.5
Stranger Mountain	17A05	5990	1/30	35	7.9	2.7	10.0
Togo	18A10	3370	1/30	27	7.2	1.9	8.6
SPOKANE RIVER							
Above Burke	15B08	4100	12/31	28	5.2	3.0	9.3
			2/1	61	14.2	4.8	16.4
4th of July Summit	16B03	3100	2/1	29	8.5	0.2	7.3
Lookout	15B02	5250	12/30	48	12.2	8.0	13.8
			1/28	83	21.8	10.8	25.6
Mosquito Ridge	16A04	5110	1/27	80	21.2	15.2	24.5
Ragged Ridge	17B02	3333	12/24	7	1.0	-	New
			2/1	24	5.6	-	New
Sherwin	16C01	3200	12/31	25	5.2	0.0	5.5
			1/20	48	13.2	0.7	10.7
Sunset	15B09A	5600	1/26	81	23.5	8.0	27.4
OKANOGAN RIVER							
Aberdeen Lake	1F01A-Can	4300	1/29	28	6.3	1.9	5.0*
Blackwall Peak	2G03-Can	6250	12/30	45	10.8	13.7	15.5*
			1/28	93	21.7	14.9	23.9*
Brenda Mine	2F18-Can	4800	12/29	22	4.3	4.3	6.5*
			1/28	42	8.8	5.4	9.4*
Brookmere	1C01-Can	3200	12/31	20	6.0	3.7	3.5*
			1/31	32	7.3	4.8	6.9*
Enderby	1F04-Can	6250	12/30	76	17.8	21.2	18.2*
			1/29	108	32.5	23.3	24.6*
Grayback Res.	2F08-Can	5225	1/29	32	6.1	2.4	6.2*
Hamilton Hill	2G06-Can	4900	1/27	51	9.4	4.5	10.4*
Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Horseshoe Basin +	19A05a	7000	2/3	66	17.8	-	12.8
Isontok Lake	2F11-Can	6300	12/29	13	1.6	0.6	3.9*
			1/31	28	5.9	1.0	5.9*
Lost Horse Mtn.	2G04-Can	6300				2.8	6.7*

\# Average based on 1963-1977 Average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
OKANOGAN RIVER (Cont.)							
Loup Loup	19A07	4650	1/27	32	8.1	4.4	7.4
McCulloch	2F03-Can	4200	12/31	13	1.2	2.9	3.2*
			1/30	29	3.6	1.5	4.8*
Missezula Mtn.	2G05-Can	5100	1/26	35	4.3	2.4	6.7*
Mission Creek	2F05-Can	6000	12/30	34	5.7	5.8	8.7*
			1/28	54	13.8	7.7	13.1*
Monashee Pass	2E01-Can	4500	12/29	19	3.6	7.3	6.4*
			2/2	50	11.3	7.6	9.4*
Mount Kobau	2F12-Can	5950	12/27	28	7.5	3.1	3.2*
			1/31	40	11.1	5.5	8.5*
Muckamuck +	19A09a	6390	2/3	62	16.7	7.0	11.4
Mutton Creek No. 1	19A01	5700	1/27	49	14.2	4.7	10.8
Mutton Creek No. 2SP	19A11SP	6000	1/27	-	6.6	1.4	New
Oyama Lake	2F19-Can	4400	1/28	27	6.0	1.2	5.0*
Paysayten +	20A28a	4300	2/3	54	14.6	12.0	14.5
Postill Lake	2F07-Can	4500	1/29	31	6.0	3.3	5.8*
Rusty Creek	19A03	4000	1/27	26	6.0	3.0	5.6
Salmon Meadows	19A02	4500	1/27	36	8.1	5.5	7.5
Silver Star Mountain	2F10-Can	6050	12/28	43	11.2	9.8	13.9*
			1/30	79	23.1	12.2	18.7*
Starvation Mountain +	19A10a	6750	2/3	66	17.8	10.0	13.8
Summerland Reservoir	2F02-Can	4200	12/30	16	2.8	3.4	4.8*
			1/30	33	7.1	3.5	7.4*
Sunday Summit	2G01A-Can	4300	1/29	28	7.5	0.4	5.0*
Touts Coulee	19A06	2845	1/27	16	3.0	2.6	3.1
Trout Creek	2F01-Can	4700	1/28	28	5.8	1.3	5.3*
Vaseux Creek	2F20-Can	4600	12/31	12	2.4	2.0	2.6*
			2/1	24	4.1	2.7	4.4*
White Rocks Mtn.	2F09-Can	6000	12/29	41	9.8	5.4	9.5*
			2/1			7.5	16.7*
METHOW RIVER							
Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Horseshoe Basin +	19A05A	7000	2/3	66	17.8	-	12.8
Loup Loup	19A07	4650	1/27	32	8.1	4.4	7.4
Mutton Creek No. 1	19A01	5700	1/27	49	14.2	4.7	10.8
Mutton Creek No. 2SP	19A11SP	6000	1/27	-	6.6	4.5	New
Rusty Creek	19A03	4000	1/27	26	6.0	3.0	5.6
Salmon Meadows	19A02	4500	1/27	36	8.1	5.5	7.5
War Creek Pass +	20A31a	6500	2/1	Not Measured		-	36.2
CHELAN LAKE BASIN							
Cloudy Pass +	20A22a	6500		Marker Down		20.4	30.0

\# Average based on 1963-1977 Average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS-PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
CHELAN LAKE BASIN (Cont.)							
Little Meadows +	20A24a	5275	2/2	124	39.7	13.8	30.5
Lyman Lake +	20A23A	5900	2/2	156	49.9	21.3	39.8
Mirror Lake	20A39	5600	2/2	94	35.0	14.0	New
Park Creek Ridge	20A12A	5600	2/2	110	38.8	15.5	36.9
Rainy Pass	20A09	4780	1/27	108	29.8	15.0	30.9
Safety Harbor +	20A30a	6300	2/1	Not Measured		-	21.0
War Creek Pass +	20A31a	6500	2/1	Not Measured		-	36.2
ENTIAT RIVER							
Blue Creek G.S. +	20B28a	5425	2/1	84	21.8	20.3	34.3
Brief	20B19	1600	1/23	32	7.6	1.3	7.0
Entiat Meadows +	20A33a	4540	2/1	132	34.3	23.1	32.2
Entiat River Trail +	20A34a	3325	2/1	70	18.9	9.5	14.5
Four Mile Ridge +	20B27a	6800	2/1	84	21.8	17.5	30.9
Fox Camp +	20A36a	6510	2/1	146	38.0	36.4	44.7
Pope Ridge	20B20	3450	1/27	62	16.4	6.6	15.2
Pugh Ridge	20A32a	6725	2/1	88	22.9	23.5	21.2
Shady Pass	20A37	6200	1/26	88	22.7	11.6	20.7
Snow Brushy +	20A35a	3910	2/1	117	31.6	13.2	30.5
Tommy Creek +	20B21a	4900	2/1	70	18.2	18.2	22.5
WENATCHEE RIVER							
Berne Mill Creek	21B23	3170	11/30	16	3.0	1.0	4.7
			12/14	42	10.5	5.8	8.2
			12/29	64	14.5	5.8	11.0
			1/29	73	24.0	6.2	21.5
Berne Mill Creek New	21B41SP	3240	11/30	16	2.5	0.0	4.9
			12/29	53	14.1	1.9	11.6
			1/29	69	22.2	2.4	20.0
Blewett Pass No. 2	20B02	4270	11/25	4	1.0	-	-
			12/23	27	6.8	0.0	6.5
			1/22	48	12.6	0.7	13.2
Chiwaukum G.S.	20B16	1810	11/30	4	0.4	0.0	1.5
			12/14	19	4.0	3.6	3.5
			12/29	26	6.2	1.7	4.8
			1/28	45	10.9	3.4	9.5
Lake Wenatchee	20B05	1970	11/30	4	0.4	0.0	1.7
			12/14	24	4.1	4.0	4.0
			12/29	31	6.2	3.1	5.9
			1/28	55	14.1	3.2	11.8
Leavenworth R.S.	20B17	1127	11/27	0	0.0	0.0	0.7
			12/11	1.7	0.4	1.6	1.9
			12/30	15	2.7	1.3	2.9
			1/28	21	5.9	0.5	5.9
Lyman Lake +	20A23A	5900	2/2	156	49.9	21.3	39.8

Average based on 1963-1977 Average

\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average +#
WENATCHEE RIVER (Cont.)							
Merritt	20B18	2140	11/30	7	1.0	0.0	2.5
			12/14	27	4.9	4.7	5.2
			12/29	36	8.4	1.3	7.1
			1/28	58	16.0	2.7	14.0
Stevens Pass	21B01	4070	11/30	34	5.3	2.2	8.5
			12/14	63	16.2	8.8	14.6
			12/29	84	22.9	6.1	21.9
			1/28	119	38.5	7.0	37.3
Stevens Pass Sand Shed	21B45	3700	11/30	24	3.7	0.5	8.2
			12/14	50	12.8	5.6	13.5
			12/29	66	18.6	2.2	15.3
			1/28	94	30.4	2.8	27.1
COLOCKUM CREEK							
Colockum Creek Upper	20B22	5300	1/27	35	10.6	1.1	11.7
Colockum Creek Lower	20B23	4300	1/27	30	7.8	3.2	8.5
Trough # 2	20B25SP	5310	1/27	44	11.5	1.0	New
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	1/27	25	6.8	2.2	6.7
Scout-A-Vista	20B04	3400	1/27	27	6.3	3.2	6.9
STEMILT CREEK							
Jump-Off	20B08	4450	1/26	30	8.4	1.2	7.1
Stemilt Slide	20B06	5000	1/26	41	12.1	3.3	11.2
Upper Wheeler	20B07	4400	1/26	27	8.4	1.0	8.4
YAKIMA RIVER							
Ahtanum R. S.	21C11	3100	12/28	24	5.4	2.8	3.2
			1/25	24	4.6	1.3	6.1
Blewett Pass No. 2	20B02	4270	11/25	4	1.0	-	-
			12/23	27	6.8	0.0	6.5
			1/22	48	12.6	0.7	13.2
Bumping Lake Old	21C08	3450	12/31	30	7.1	3.4	6.5
			1/15	30	8.1	2.8	11.2
			1/29	44	12.1	4.0	13.3
Bumping Lake New	21C36	3400	12/15	40	5.9	4.7	6.4
			12/31	35	6.8	4.6	8.3
			1/15	36	10.0	5.1	14.2
			1/29	54	16.1	5.6	16.8

Average based on 1963-1977 Average

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
YAKIMA RIVER (Cont.)							
Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Colockum Pass	20B09	5370	1/27	45	14.2	2.6	11.8
Cooke Creek	20B10	4123	1/27	20	5.1	0.5	5.3
Corral Pass	21B13	6000	2/3	102	36.9	9.0	17.2
Green Lake	21C10	6000	1/25	100	36.7	11.3	19.5
Grouse Camp	20B11	5385	1/26	53	15.3	5.5	12.3
High Creek	20B12	2930	1/26	27	4.9	1.7	5.5
Joe Lake +	21B46a	4624	2/1	Not Measured		8.4	41.8
Lake Cle Elum	21B14M	2200	12/3	7.2	1.8	-	0.9
			12/11	9.8	2.4	3.0	2.3
			12/29	30	6.6	2.2	3.9
			1/14	24	7.4	1.0	7.7
			1/27	36	11.8	0.9	8.5
Lemah Creek +	21B47a	3327	2/3	118	40.9	12.0	31.0
Manashtash	20C01	3935	1/28	21	4.6	1.4	4.3
Morse Lake	21C17	5400	2/1	Not Measured		16.0	38.9
Nanum	20B13	3875	1/26	25	5.1	2.5	7.4
Olallie Meadows	21B02	3625	2/3	113	42.9	3.2	34.9
Satus Pass	20D01	4030	1/28	40	11.8	1.4	8.9
Stampede Pass SP	21B10	3860	11/30	20	3.5	3.1	6.9
			12/14	42	11.0	5.2	13.8
			12/28	78	17.5	5.9	17.4
			2/3	114	40.2	6.7	31.5
Trail Creek	20B14	3360	1/27	15	4.2	0.4	2.9
Tunnel Avenue	21B08	2450	12/2	9.6	1.9	-	2.9
			12/11	18	5.4	4.2	6.9
			12/29	46	11.5	3.1	8.4
			1/12	42	13.2	2.0	15.0
			1/27	62	20.0	2.2	17.8
Van Epps Pass +	20B26a	5925	2/3	137	47.5	18.3	39.5
Walters Flat	20B15	3360	1/26	24	5.8	3.1	6.5
Waptus Lake +	21B49a	3024	2/3	124	43.0	7.4	32.3
White Pass (E. Side)	21C28	4500	12/14	33	8.4	4.6	7.6
			12/30	48	10.2	2.6	10.5
			1/15	52	15.6	1.2	14.4
			1/28	75	23.4	3.0	18.4
AHTANUM CREEK							
Ahtanum R. S.	21C11	3100	12/28	24	5.4	2.8	3.2
			1/25	24	4.6	1.3	6.1
Green Lake	21C10	6000	1/25	100	36.7	11.3	19.5

\# Average based on 1963-1977 Average
\+ Snow water equivalent estimated from aerial stadia observation
* Pillow reading

USDA SCS-PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
LOWER COLUMBIA DRAINAGE							
ASOTIN CREEK							
Spruce Springs	17C04	5700	1/25	66	20.2	5.1	18.2
MILL CREEK							
Homestead	17C01	4030	1/26	44	10.5	0.5	7.2
Martin Springs	17C02	4400	1/26	55	12.7	1.1	10.3
High Ridge	18D19	4150	2/1	95	29.6	7.5	17.7
KLICKITAT RIVER							
Satus Pass	20D01	4030	1/28	40	11.8	1.4	8.9
COWLITZ RIVER							
Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Sheep Canyon	22C10SP	4050	1/6	65	15.8	-	New
			2/1	-	35.3	SNOTEL	
Strawberry Landing	22C08SP	3280	1/6	104	35.5	-	New
			2/1	-	51.3	SNOTEL	
White Pass (E. Side)	21C28	4500	12/14	33	8.4	4.6	7.6
			12/30	48	10.2	2.6	10.5
			1/15	52	15.6	1.2	14.4
			1/28	75	23.4	3.0	18.4
LEWIS RIVER							
June Lake	22C09SP	3200	1/6	66	18.9	-	New
			2/1	-	31.7	SNOTEL	
Lone Pine Shelter	21C26	3800	1/6	73	19.2	-	New
			2/1		35.9	SNOTEL	
Plains of Abraham	22C01SP	4400	1/6	147	58.5	-	New
			2/1	SNOTEL	DOWN		
Sheep Canyon	22C10SP	4050	1/6	65	15.8	-	New
			2/1	-	35.3	SNOTEL	
Spencer Meadow	21C20a	3400	1/6	66	17.6	-	New
			2/1	SNOTEL	DOWN		
Surprise Lakes	21C13A	4250	1/6	105	32.4	-	New
			2/1	-	48.4	SNOTEL	

\# Average based on 1963-1977 Average
* Pillow reading

USDA-SCS-PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average +#
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Corral Pass	21B13	6000	2/3	102	36.9	9.0	17.2
Morse Lake	21C17	5400	2/1	Not Measured		16.0	38.9
GREEN RIVER							
Airstrip	21B24	1800	1/4	24	4.3	-	1.8
			1/31	12	4.6	0.0	5.6
Charley Creek	21B25	1200	12/30	8.2	1.3	-	1.5
			1/31	0	0.0	0.0	1.3
Cougar Mountain	21B42SP	3200	2/3	71	24.0	2.4	17.3
Grass Mtn. No. 2	21B27	2900	1/4	38	8.1	-	5.8
			1/31	36	12.7	2.1	15.2
Grass Mtn. No. 3	21B28	2100	1/1	Not Measured		-	2.2
			1/31	18	6.3	0.6	5.2
Lester Creek	21B29	3100	1/4	55	11/7	-	8.5
			1/31	60	18.0	3.3	17.5
Lynn Lake	21B50	4000	1/4	56	15.1	-	8.5
			1/31	64	25.4	3.1	18.2
Sawmill Ridge	21B31	4700	1/4	69	15.8	-	13.7
			1/31	84	28.8	6.3	27.5
Stampede Pass SP	21B10	3860	11/30	20	3.5	3.1	6.9
			12/14	42	11.0	5.2	13.8
			12/28	78	17.5	5.9	17.4
			2/3	114	40.2	6.7	31.5
Twin Camp	21B30	4100	1/1	Not Measured		-	10.6
			1/31	76	26.0	2.7	18.4
SNOQUALMIE RIVER							
Olallie Meadows	21B02	3625	2/3	113	42.9	3.2	34.9
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	11/30	34	5.3	2.2	8.5
			12/14	63	16.2	8.8	14.6
			12/29	84	22.9	6.1	21.9
			1/28	119	38.5	7.0	37.3
Stevens Pass Sand Shed	21B45	4070	11/30	24	3.7	0.5	8.2
			12/14	50	12.8	5.6	13.5
			12/29	66	18.6	2.2	15.3
			1/28	94	30.4	2.8	27.1

\# Average based on 1963-1977 Average
* Pillow reading

USDA SCS-PORTLAND OREGON 1973

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 9

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	1/27	46	13.4	0.8	12.2
Beaver Pass	21A01	3680	1/28	84	23.6	3.7	24.4
Brown Top Ridge +	21A28a	6000	1/27	147	46.5	26.6	48.1
Cloudy Pass +	20A22a	6500	2/1	Not Measured		20.4	30.0
Devils Park	20A04	5900	1/27	114	32.6	18.4	34.0
Freezeout Creek Trail	20A01	3500	1/28	50	11.7	0.5	11.3
Freezeout Meadows New	20A38	5000	1/28	86	23.0	9.0	28.2
Granite Creek	21A29A	3500	1/27	69	13.9	3.9	16.3
Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Klesilkwa	3D03A-Can	3700	2/4	61	14.7	0.1	9.3*
Lightning Lake	3D02-Can	4000		Late Report		2.6	5.8*
Lyman Lake	20A23A	5900	2/2	156	49.9	21.3	39.8
Meadow Cabins	20A08	1900	1/28	24	7.1	0.0	6.9
New Hozomeen Lake	21A30	2800	1/28	41	9.7	0.8	10.5
New Tashme	3D01A-Can	2500	2/1	41	11.2	0.7	8.2*
Rainy Pass	20A09	4780	1/27	108	29.8	15.0	30.9
Thunder Basin	20A07	4200	1/28	61	8.0	1.0	17.0
BAKER RIVER							
Dock Butte +	21A11A	3800	12/29	82	29.0	4.0	27.8
				Late Report		4.0	47.4
Easy Pass +	21A07A	5200	12/29	66	23.0	18.0	30.9
				Late Report		16.0	51.7
Jasper Pass +	21A06A	5400	12/29	112	39.0	24.0	43.0
				Late Report		23.0	66.5
Marten Lake	21A09A	3600	12/29	76	27.0	8.0	34.8
				Late Report		11.0	55.4
Mt. Blum +	21A18a	5800	12/29	53	19.0	14.0	30.4
				Late Report		16.0	48.4
Panorama New	21A26	4300		Not Measured		-	48.7
Rocky Creek	21A12A	2100	12/29	56	20.0	0.0	13.0
				Late Report		2.0	24.7
Schreibers Meadow	21A10A	3400	12/29	70	25.0	4.0	24.8
				Late Report		3.0	41.0
S. F. Thunder Creek +	21A14A	2200	12/29	22	8.0	0.0	5.4
				Late Report		2.0	10.0
Watson Lakes	21A08A	4500	12/29	65	23.0	4.0	27.5
				Late Report		8.0	44.4
NOOKSACK RIVER							
Glacier Creek	21A23	3700		Not Measured		0.0	8.5
Panorama New	21A26	4300		Not Measured		-	48.7

\# Average based on 1963-1977 Average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS-PORTLAND OREGON 1973

WSFB-X4-L

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 10

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (inches)	Water Content (inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OLYMPIC PENINSULA DRAINAGE							
DUNGENESS RIVER							
Deer Park	23B04	5200	1/29	61	18.6	0.8	15.2
MORSE CREEK							
Cox Valley	23B14	4500	1/31	106	32.4	2.3	29.1
ELWHA RIVER							
Hurricane	23B03	4500	1/27	59	15.2	0.7	16.4

Average based on 1963-1977 Average

USDA SCS PORTLAND OREGON 1973

PRECIPITATION STORAGE GAGES

Amount of precipitation in inches that has accumulated since the previous measurement.

BIG BOULDER CREEK

10/1/80	Recharge
11/1/80	1.8
12/1/80	11.0
1/1/81	15.4
2/1/81	2.3
3/1/81	11.3
4/1/81	1.8
5/1/81	5.8
6/1/81	2.6
7/1/81	3.4
8/1/81	0.6
9/2/81	1.0
10/1/81	2.0
11/1/81	4.4
12/1/81	6.0

BLEWETT PASS

8/8/81	
9/1/81	1.0
10/1/81	2.0
11/1/81	3.0
12/1/81	3.4
1/1/82	7.8
2/1/82	9.5

BUMPING RIDGE

10/1/80	Recharge
11/1/80	0.5
12/1/80	12.7
1/1/81	11.4
2/1/81	0.4
3/1/81	7.8
4/1/81	3.3
5/1/81	4.0
6/1/81	0.2
7/2/81	4.8
8/1/81	0.4
9/1/81	0.2
11/1/81	9.6
12/1/81	2.1
1/1/82	8.0
1/31/82	5.7

BUNCHGRASS MDW

10/1/80	Recharge
11/1/80	3.1
12/1/80	6.1
1/1/81	8.3
Inoperable	
6/3/81	
7/1/81	10.9
8/1/81	6.0
9/1/81	0.3
10/1/81	2.3
11/1/81	4.7
12/1/81	5.3
1/2/82	6.3
1/31/82	0

CARNATION 15E

8/4/80	Recharge
9/6/80	7.88
10/2/80	5.54
11/7/80	10.22
12/2/80	15.98
1/6/81	20.23
2/3/81	2.77
3/3/81	20.45
4/2/81	6.82
5/5/81	17.25
6/3/81	5.32
7/2/81	12.56
7/30/81	3.62
9/6/81	1.70
10/6/81	13.00
11/3/81	7.66
12/1/81	10.65

CEDAR FALLS 4SE

7/28/80	Recharge
9/3/80	4.68
10/3/80	6.60
11/3/80	3.19
12/1/80	15.76
1/6/81	17.04
2/2/81	4.26
3/2/81	14.48
4/2/81	7.03
5/4/81	14.91
6/5/81	6.39
7/1/81	10.44
7/29/81	2.56
9/1/81	1.70
10/1/81	5.54
11/2/81	9.58
12/1/81	8.73

CEDAR FALLS 5SE

7/31/80	Recharge
9/3/80	3.62
10/3/80	3.41
11/3/80	1.49
1/6/81	22.15
2/2/81	2.99
3/3/81	8.52
4/2/81	4.47
5/1/81	7.45
6/2/81	5.00
7/2/81	8.52
7/27/81	1.49
9/1/81	0.64
10/2/81	8.51
11/2/81	1.70
12/1/81	4.26

CEDAR FALLS 7SE

7/30/80	Recharge
9/2/80	11.72
10/1/80	3.41
11/3/80	3.83
12/1/80	15.12
1/6/81	15.98
2/2/81	3.41
3/2/81	14.91
4/1/81	5.53
5/4/81	13.00
6/4/81	4.68
7/1/81	8.95
7/30/81	1.92
9/1/81	1.50
10/1/81	5.53
11/2/81	8.74
12/1/81	7.45

CEDAR FALLS 7SSE

7/30/80	Recharge
9/30/80	5.75
10/3/80	4.47
11/3/80	3.20
12/1/80	14.69
1/6/81	18.75
2/2/81	3.62
3/2/81	15.76
4/2/81	6.39
5/4/81	14.48
6/5/81	6.18
7/1/81	9.16
7/28/81	2.77
9/1/81	2.13
10/1/81	5.11
11/3/81	9.37
12/1/81	8.52

CEDAR FALLS 8SE

7/29/80	Recharge
9/3/80	4.05
10/3/80	4.04
11/3/80	1.92
12/1/80	13.21
1/6/81	14.05
2/2/81	2.13
3/2/81	12.57
4/2/81	4.43
5/4/81	10.86
6/2/81	3.19
7/1/81	7.24
7/27/81	1.49
9/1/81	1.28
10/1/81	4.04
11/2/81	7.25
12/1/81	5.53

CEDAR FALLS 10SE

7/30/80	Recharge
9/2/80	6.18
10/3/80	4.26
11/3/80	4.47
1/6/81	34.08
2/2/81	3.84
3/2/81	18.53
4/2/81	7.03
5/4/81	15.76
6/4/81	6.39
7/1/81	11.08
7/28/81	2.55
9/1/81	2.98
10/1/81	5.32
11/2/81	8.74
12/1/81	8.73

CONSULTANT CREEK

8/4/30	Recharge
9/6/80	8.56
10/2/80	6.30
11/7/80	8.77
1/6/81	33.30
2/3/81	4.72
3/3/81	17.32
5/5/81	26.10
6/3/81	2.70
7/2/81	17.10
7/30/81	4.72
9/6/81	2.48
10/6/81	12.60
11/3/81	6.74
12/1/81	9.46

CORRAL PASS

10/1/80	Recharge
11/1/80	22.3
12/1/80	6.4
1/1/81	6.9
2/1/81	1.7
3/1/81	6.5
4/1/81	2.9
Inoperable	
10/1/81	Recharge
11/1/81	2.3
12/1/81	7.3
1/1/82	11.8
2/1/82	14.1

COUGAR MOUNTAIN

No data prior to	
10/1/81	Recharge
11/1/81	8.5.
12/1/81	7.0
1/1/82	16.6
2/1/82	22.9

DRY CREEK

8/5/80	Recharge
9/6/80	10.35
10/2/80	5.85
11/7/80	8.78
12/2/80	15.76
2/3/81	22.50
4/2/81	27.90
5/5/81	19.12
6/3/81	6.75
7/2/81	11.92
7/31/81	3.82
9/6/81	1.58
10/6/81	13.50
11/3/81	7.65
12/1/81	9.90

FISH LAKE

10/1/80	Recharge
4/1/81	47.1
5/1/81	4.5
6/1/81	2.2
7/1/81	3.2
8/1/81	1.6
9/1/81	0.6
10/1/81	3.7
11/1/81	5.7
12/1/81	5.8
1/1/82	9.4
2/1/82	11.0

FROZEN MOUNTAIN

8/5/80	Recharge
9/6/80	10.80
10/2/80	6.52
11/7/80	11.26
Out of Service	
7/31/81	Recharge
9/6/81	2.48
10/6/81	13.94
11/3/81	9.00
12/1/81	11.93

GREEN LAKE

No data prior to	
10/1/81	Recharge
12/1/81	6.4
1/1/82	12.5
1/8/82	0.8

GROUSE CAMP

No data prior to	
10/1/81	Recharge
11/11/81	3.6
11/25/81	4.0
Inoperable	

HARTS PASS

10/1/80	Recharge
3/26/81	71.2
4/1/81	7.5
5/1/81	3.2
6/1/81	3.9
7/1/81	2.9
8/1/81	1.6
9/1/81	0.9
10/1/81	6.3
11/1/81	3.3
12/1/81	5.6
1/2/82	8.3
2/1/82	10.7

JUNE LAKE

10/1/80	Recharge
12/13/80	76.8
1/1/81	4.0
2/1/81	5.1
3/1/81	29.3
5/8/81	38.4
6/1/81	3.4
7/1/81	16.2
8/1/81	0.8
9/1/81	0
10/1/81	9.0
11/1/81	23.5
12/1/81	24.7
1/6/82	39.2
2/1/82	31.1

LESTER 5NNE

7/28/80	Recharge
9/2/80	6.60
10/1/80	3.41
11/4/80	4.26
1/7/81	28.76
3/3/81	18.74
5/1/81	18.10
6/2/81	6.17
7/2/81	10.65
7/29/81	1.07
9/2/81	3.40
10/2/81	3.62
11/3/81	4.90

LESTER 7NNW

7/31/80	Recharge
9/3/80	4.90
10/3/80	3.41
11/4/80	4.69
1/7/81	31.74
2/3/81	2.98
3/3/81	16.82
4/2/81	4.48
5/1/81	10.65
6/5/81	5.32
7/2/81	7.88
8/4/81	1.28
9/2/81	2.34
10/5/81	6.18
11/3/81	5.11
12/2/81	11.08

LESTER 8N

7/31/80	Recharge
9/3/80	5.54
10/3/80	5.32
11/4/80	3.62
1/7/81	31.52
2/3/81	3.41
3/3/81	15.76
4/2/81	4.47
5/5/81	12.78
6/2/81	4.47
7/2/81	8.10
8/4/81	2.55
9/2/81	2.56
10/5/81	5.32
11/3/81	5.12

LESTER 8NNW

7/31/80	Recharg
9/3/80	4.68
10/3/80	4.26
11/4/80	4.05
1/7/81	30.67
2/3/81	2.98
3/3/81	15.34
4/2/81	4.26
5/1/81	10.01
6/5/81	5.54
7/2/81	6.82
8/4/81	3.62
9/2/81	2.56
10/2/81	5.32
11/3/81	5.54
12/2/81	10.22

LESTER 10NNW

7/28/80	Recharg
9/3/80	4.90
10/3/80	5.12
11/3/80	3.62
12/1/80	15.55
1/7/81	17.69
2/2/81	2.76
3/3/81	16.61
4/2/81	5.11
5/1/81	12.14
6/2/81	4.69
7/2/81	10.65
7/29/81	1.06
9/1/81	2.56
10/5/81	6.81
11/2/81	5.75
12/2/81	10.23

LESTER 11NW

7/29/80	Recharg
9/3/80	4.48
10/3/80	4.26
11/3/80	2.13
12/1/80	14.06
1/7/81	15.54
2/2/81	3.40
3/2/81	14.27
4/2/81	3.84
5/1/81	10.86
6/2/81	4.69
7/1/81	9.58
7/29/81	1.71
9/2/81	2.77
10/2/81	4.48
11/3/81	5.53
12/2/81	9.16

LONE PINE

No data prior to	
10/1/81	Recharge
11/1/81	13.5
12/1/81	14.4
1/1/82	15.2
2/1/82	8.9

MIDDLE FORK TAYLOR

8/1/80	Recharge
9/2/80	5.75
10/3/80	4.90
11/3/80	6.18
12/1/80	12.36
1/6/81	17.68
2/2/81	4.04
3/2/81	13.85
4/1/81	5.11
5/4/81	11.50
6/3/81	6.61
7/1/81	11.50
8/5/81	2.34
9/1/81	1.07
10/1/81	6.82
11/3/81	10.22
12/1/81	3.62

MIRROR LAKE

10/1/81	Recharge
11/1/81	5.4
12/1/81	6.6
1/6/82	10.0
1/16/82	0.8

MONTE CRISTO

10/31/80	Recharge
11/4/81	138.15

MORSE LAKE

10/1/80	Recharge
11/7/80	2.2
12/1/80	10.2
12/22/80	10.5
2/11/81	13.3
3/1/81	11.4
4/1/81	3.7
5/1/81	8.7
Leak	
10/1/81	Recharge
11/1/81	9.5
12/1/81	12.0
1/1/82	7.2
2/1/82	11.3

MT. INDEX

8/5/80	Recharge
9/6/80	10.57
10/2/80	6.98
11/7/80	10.58
1/6/81	40.50
2/3/81	4.05
3/3/81	22.28
5/5/81	28.36
6/3/81	7.20
7/2/81	13.94
7/31/81	4.28
9/6/81	2.93
10/6/81	12.14
11/3/81	8.56

NORTH FORK TAYLOR

8/1/80	Recharge
9/2/80	4.47
10/3/80	4.26
11/3/80	4.26
12/1/80	12.14
1/6/81	14.91
2/2/81	2.98
3/2/81	10.87
4/1/81	4.26
5/4/81	9.16
6/3/81	6.60
7/1/81	9.58
8/5/81	2.35
9/1/81	1.28
10/1/81	4.69
11/3/81	8.52
12/1/81	8.73

OLALLIE MEADOWS

10/1/81	Recharge
11/1/81	3.5
12/1/81	11.3
1/2/82	20.0
1/21/82	7.1

PARADISE

10/1/80	Recharge
11/2/80	5.6
12/1/80	21.0
1/1/81	25.3
2/10/81	0.9
3/1/81	17.4
4/19/81	15.8
5/2/81	6.7
6/1/81	5.3
7/1/81	7.8
8/1/81	0.5
9/1/81	0
10/1/81	28.6
11/1/81	0
12/1/81	11.4
1/1/82	21.5
2/1/82	6.7

PARK CREEK RIDGE

10/1/80	Recharge
11/1/80	2.3
12/1/80	14.0
1/1/81	16.0
2/1/81	3.0
3/2/81	10.8
4/1/81	1.7
5/1/81	6.4
6/1/81	1.6
7/1/81	4.4
8/1/81	1.1
9/1/81	1.1
10/1/81	1.8
11/1/81	4.1
12/1/81	3.3
1/1/82	13.5
1/30/82	13.7

PIGTAIL PEAK

10/1/80	Recharge
2/13/81	130.2
3/1/81	9.3
4/1/81	3.5
5/1/81	7.6
6/1/81	2.7
7/1/81	5.6
8/1/81	2.6
10/1/81	1.0
11/1/81	4.3
12/1/81	8.2
1/1/82	10.0
1/30/82	3.1

PLAINS OF ABRAHAM

10/1/80	Recharge
12/1/80	40.3
2/1/81	27.6
3/1/81	23.1
4/1/81	6.8
5/1/81	11.4
6/1/81	3.5
7/1/81	8.8
8/1/81	1.0
9/1/81	0.1
10/1/81	7.2
10/18/81	8.4
Inoperable	

POPE RIDGE

10/1/81	Recharge
11/1/81	2.5
12/1/81	3.8
1/1/82	6.7
2/1/82	15.2

PORT ANGELES 11S

9/1/80	Recharge
9/1/81	47.74

POTATO HILL

10/1/80	Recharge
3/15/81	75.5
5/7/81	7.1
10/1/81	Recharge
11/1/81	5.4
12/1/81	9.4
1/1/82	14.9
1/27/82	13.2

RAINY PASS

10/1/80	Recharge
11/1/80	0.5
11/30/80	11.7
3/25/81	67.1
4/1/81	1.0
5/1/81	5.3
6/1/81	3.2
7/1/81	4.8
8/1/81	0.9
9/1/81	2.0
10/1/81	1.0
11/1/81	4.7
12/1/81	5.7
1/1/82	9.6
2/1/82	8.7

REGAN HIGH

10/4/80	Recharge
12/18/80	10.56
1/29/81	5.92
3/2/81	5.60
3/27/81	1.0
4/13/81	5.0
5/26/81	0.5
7/27/81	5.48
8/27/81	0.5
9/28/81	0.48

RUSTY CREEK

9/25/80	Recharge
10/27/80	0.3
11/25/80	1.6
12/23/80	2.5
1/28/81	2.7
2/25/81	3.8
3/27/81	0.8
4/28/81	0.6
10/1/81	Recharge
1/27/82	13.70

SALMON MEADOWS

9/25/80	2.38
10/27/80	0
11/25/80	1.62
12/23/80	3.25
1/28/81	2.75
2/26/81	4.25
3/27/81	1.00
4/28/81	1.50
10/1/81	Recharge
1/27/82	17.13

SHEEP CANYON

10/1/80	Recharge
12/11/80	25.0
1/1/81	10.8
2/4/81	3.8
3/1/81	20.2
4/1/81	10.2
5/6/81	13.8
6/1/81	5.2
8/1/81	7.4
9/1/81	1.1
10/1/81	4.5
11/1/81	19.4
12/1/81	15.2
1/6/82	6.6
2/1/82	38.3

SNOHOMISH 8W

8/6/80	Recharge
9/6/80	10.22
10/2/80	8.52
11/7/80	12.99
Road Blocked	
6/4/81	126.10
7/2/81	15.97
8/3/81	3.84
10/6/81	18.31

SPENCER MEADOW

10/1/80	Recharge
3/12/81	44.9
4/1/81	7.6
5/1/81	8.8
6/1/81	4.5
7/4/81	8.7
8/1/81	0.4
9/1/81	0.3
10/1/81	43.8
11/1/81	10.0
12/1/81	15.0
1/1/82	20.0
2/1/82	20.3

SPRUCE SPRINGS

10/1/80	Recharge
10/1/81	39.80

STAMPEDE PASS

10/1/81	Recharge
11/1/81	5.5
12/1/81	7.7
Inoperable	

STEVENS PASS

10/1/80	Recharge
11/1/80	1.2
12/1/80	8.2
1/1/81	9.1
2/1/81	1.3
3/1/81	6.8
4/2/81	1.5
5/2/81	4.3
6/3/81	1.8
Inoperable	
10/1/81	Recharge
12/1/81	5.4

STRAWBERRY LANDING

10/1/80	Recharge
12/12/80	12.6
12/26/80	19.6
3/6/81	25.8
4/1/81	6.6
5/4/81	11.2
6/5/81	5.6
7/1/81	11.5
8/1/81	1.7
9/4/81	0.5
10/1/81	6.9
12/4/81	28.4
1/1/82	15.1
2/1/82	13.8

SURPRISE LAKES

10/1/80	Recharge
12/1/80	17.4
3/12/81	23.6
4/1/81	3.7
5/8/81	9.8
6/1/81	4.3
7/1/81	8.9
8/1/81	5.4
9/1/81	0.9
10/1/81	5.0
11/1/81	9.4
12/1/81	14.1
1/1/82	22.1
2/1/82	20.4

SWAUK PASS

9/30/80	Recharge
12/17/80	6.75
12/30/80	2.82
1/27/81	1.68
3/2/81	4.79
3/27/81	1.69
4/13/81	1.13
4/28/81	0.14
5/26/81	2.39
7/27/81	1.98
8/27/81	2.07

TAYLOR CREEK

8/1/80	Recharge
9/2/80	3.62
10/3/80	3.84
11/3/80	3.20
12/1/80	11.50
1/6/81	11.50
2/2/81	2.56
3/2/81	8.95
4/1/81	4.47
5/4/81	8.31
6/3/81	5.96
7/1/81	7.96
8/5/81	2.14
9/1/81	1.07
10/1/81	4.90
11/3/81	7.02
12/1/81	5.54

TOUCHET #2

10/1/80	Recharge
11/1/80	2.7
12/1/80	6.4
1/20/81	10.8
2/1/81	1.3
3/3/81	8.2
4/1/81	5.9
5/1/81	6.4
6/1/81	2.8
7/1/81	7.1
8/1/81	1.1
9/1/81	1.3
10/1/81	0.3
11/1/81	4.4
12/1/81	7.2
1/1/82	12.4
1/31/82	14.3

TROUGH

10/1/80	Recharge
11/1/80	1.3
12/1/80	3.9
1/1/81	6.3
2/1/81	2.9
3/1/81	3.9
4/1/81	1.2
5/1/81	0.8

TROUGH (Cont'd)

6/1/81	2.1
7/2/81	1.0
8/1/81	0.5
9/1/81	0.6
10/1/81	3.2
11/1/81	3.9
12/4/81	4.8
1/1/82	4.5
1/30/82	2.8

UPPER WHEELER

10/1/80	Recharg
3/26/81	25.2
4/1/81	0
5/1/81	1.5
6/1/81	2.7
7/1/81	1.4
8/1/81	3.5
10/1/81	Recharg
11/1/81	4.3
12/1/81	6.4
1/1/82	5.8
2/1/82	5.1

WHITE PASS

10/1/80	Recharg
11/21/80	2.5
12/20/80	27.3
1/1/81	8.5
2/1/81	2.1
3/1/81	7.3
4/1/81	1.2
5/1/81	3.6
6/1/81	2.7
7/1/81	3.2
9/2/81	0
10/1/81	1.3
11/1/81	4.2
12/1/81	5.1
1/1/82	7.5
1/31/82	11.8

YELLOW CREEK

8/4/80	Recharg
9/6/80	6.98
10/2/80	4.50
11/7/80	7.42
12/2/80	10.12
1/6/81	12.60
2/3/81	2.93
3/3/81	12.60
4/2/81	5.40
5/5/81	13.05
6/3/81	6.75
7/2/81	9.00
7/30/81	4.05
9/6/81	1.58
10/6/81	10.35
11/3/81	5.18
12/1/81	7.66

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U. S. Department of Agriculture
  Forest Service
U. S. Department of Commerce
  NOAA, National Weather Service
U. S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service

PUBLIC AND PRIVATE UTILITIES

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OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

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Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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Water Supply Outlook For Washington

SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE
Cooperating with
EPARTMENT OF ECOLOGY STATE OF WASHINGTON

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AS OF
March 1, 1982

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TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snawfall. This snowfall accumulates during the winter and spring, several manths before the snow melts and appears as streamflow. Since the runaff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally an measurement of the water equivalent of the mountain snawpack.

Forecasts become more accurate as more of the data affecting runaff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt seasan will interact with a resultant average effect on runoff. Early season forecasts are therefare subject to a greater change than those made on later dates.

The snaw caurse measurement is abtained by sampling snaw depth and water equivalent at surveyed and marked locations in mountain areas. A total af abaut ten samples are taken at each location. The average of these are reported as snaw depth and water equivalent. These measurements are repeated in the same lacation near the same dates each year.

Snaw surveys are made monthly ar semi-monthly from January 1 through June 1 in most states. There are about 1900 snaw courses in Western United States and in the Columbia Basin in British Calumbia. Networks of automatic snow water equivalent and related data sensing devices, alang with radio telemetry are expanding and will provide a continuaus record af snow water and ather parameters at key lacations.

Detailed data an snow course and sail moisture measurements are presented in state and lacal reparts. Other data an reservoir storage, summaries of precipitation, current streamflaw, and sail maisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditians, including selected streamflow forecasts, summary of snow accumulation to date, and starage in larger reservoirs.

Snow survey and soil maisture data far the period of record are published by the Soil Conservation Service by states abaut every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates fram January 1 through June 1 in cooperation with state water administratars, agricultural experiment stations and others. Copies af the reparts far Western United States and all state reports may be abtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregan 97209.

Copies of state and local reparts may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Roam 129, 2221 East Narthern Lights Blvd., Anchorage, Alaska 99504
Arizana	Raam 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Calarada (N. Mex.)	P. O. Bax 17107, Denver, Calarada 80217
Idaho	Raam 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Bax 98, Bazeman, Montana 59715
Nevada	P. O. Bax 4850, Reno, Nevada 89505
Oregan	1220 S. W. Third Ave., Partland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Caurt Hause, Spakane, Washington 99201
Wyoming	P. O. Bax 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

☆ GPO 1981 593-783

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

NORMAN A. BERG
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON D C

Released by

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

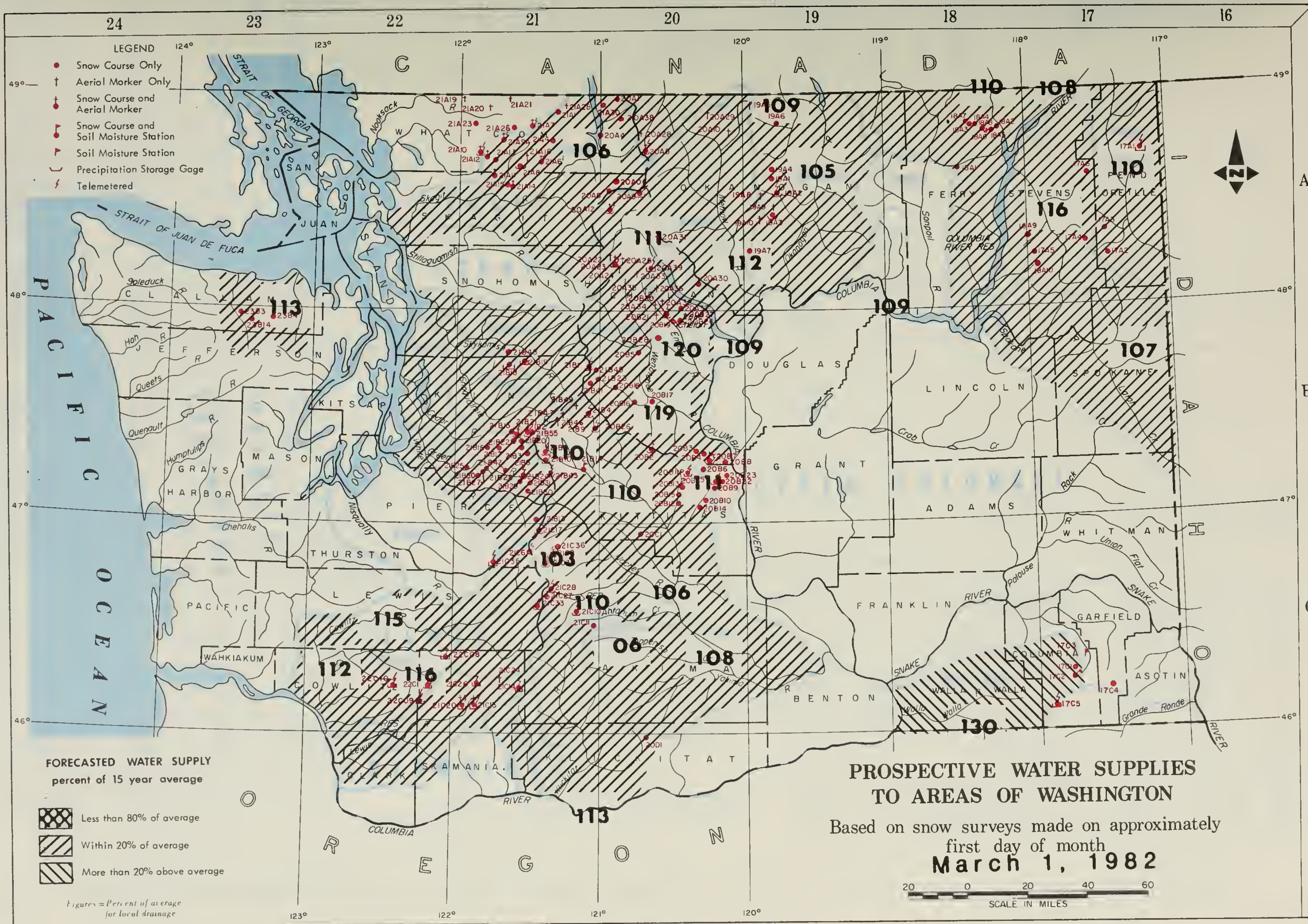
In Cooperation with

DONALD W. MOOS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor
JAMES K. MARRON, Assistant Snow Survey Supervisor
DONALD R. EASTLUND, Hydrologic Technician
NORINE P. KENT, Statistical Assistant

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201


PROSPECTIVE WATER SUPPLIES
TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
March 1, 1982
LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
SCALE IN MILES
20 0 20 40 60
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF GEORGIA
STRAIT OF JUAN DE FUCA
WHATCOM
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
SNOHOMISH
SKAGIT
CHELAN
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LINCOLN
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COLUMBIA
ASOTIN
WAHKIAKUM
COWLITZ
SKAMANIA
KLICKITAT
BENTON
WALLA WALLA
CLARK
110
108
109
106
105
110
116
111
112
113
120
109
107
119
110
110
114
103
110
106
115
112
116
06
108
130
113

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

Pend Oreille River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bayer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970

Kettle River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snaw Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600

Colville River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baird	17A6	19	36N	42E	3215
Carlsan	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mauntain	17A5	26	31N	38E	4990
Taga	18A10	6	29N	38E	3370

Sanpail River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sherman Creek Pass	18A1	19	36N	35E	5350

Okanagan River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Muttan Creek Na. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salman Meadaws	19A2SP	33	37N	24E	4500
Starvatian Mtn.	19A10a	15	35N	23E	6750
Tauts Caulee	19A6	30	39N	25E	2845

Methaw River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Billy Goat Pass	20A10a	10	38N	20E	6400
Dallar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Harseshae Basin	19A5a	15	40N	23E	7000
Laup Laup	19A7	36	34N	23E	4650

Chelan Lake Basin

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Claudy Pass	20A22a	12	31N	15E	6500
Greenwaod Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbar	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirrar Lake	20A39	30	31N	18E	5600

Entiat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Blue Creek G.S.	20828a	19	28N	18E	5425
Brief	20819	34	28N	19E	1600
Entiat Meadaws	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20827a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20820	22	29N	18E	3540
Pape Ridge Snaw Pillow	20824SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tammy Creek	20821a	10	28N	18E	4900

Wenatchee River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	2085	33	27N	17E	1970
Leavenwarth R. S.	20B17	1	24N	17E	1127
Merritt	20818	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Traugh #2	20825SP	10	20N	20E	5310

Calackum Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Calockum Creek Upper	20B22	11	20N	20E	5300
Calockum Creek Lawer	20B23	1	20N	20E	4300

Squilchuck Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400

Stemilt Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400

Yakima River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Calockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	2184SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20811SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Jae Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21847a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Marse Lake	21C17SP	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20B26a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

Asatin Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Spruce Springs	17C4	9	8N	40E	5700

Touchet River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cause	17C3m	2	9N	40E	3370
Hamestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Tauchet Na. 2	17C5SP	6	7N	40E	5530

Klickitat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Satus Pass	20D1	21	6N	17E	4030

Lewis River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadaw	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250

Cawlitz River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patato Hill	21C14SP	36	10N	10E	4500
Sheep Canyan	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

Nisqually River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Paradise Park (New)	21C35SP	13	15N	8E	5500

White River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Corral Pass	21B13SP	30	18N	11E	6000

Green River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mauntain Na. 2	21B27	14	20N	8E	2900
Grass Mauntain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Snawshae Butte	21B43SP	14	20N	11E	5000
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100

Cedar River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washingtan	21B15P	8	22N	9E	3000
Rex River	21B17P	11	21N	9E	2400
Sauth Fark Cedar	2186P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400

Snoqualmie River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Alpine Meadaw	21B48	31	27N	9E	3500
Olallie Meadaws	21B2P	19	22N	11E	3625
South Fark Tolt	21B18P	26	26N	9E	1900
Olallie Meadaws East	21B55SP	20	22N	11E	8700

Skykamish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Lake Elizabeth	21B19P	33	26N	10E	2900

Skagit River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brawn Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadaws (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadaws Cabins	20A8	29	36N	14E	1900
New Hozameen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

Baker River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dack Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadaw	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500

Naaksack River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bald Mauntain	21A19a	7	40N	7E	4400
Canyan	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panarama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

Dungeness River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Park	23B4	1	28N	5W	5200

Marse Creek

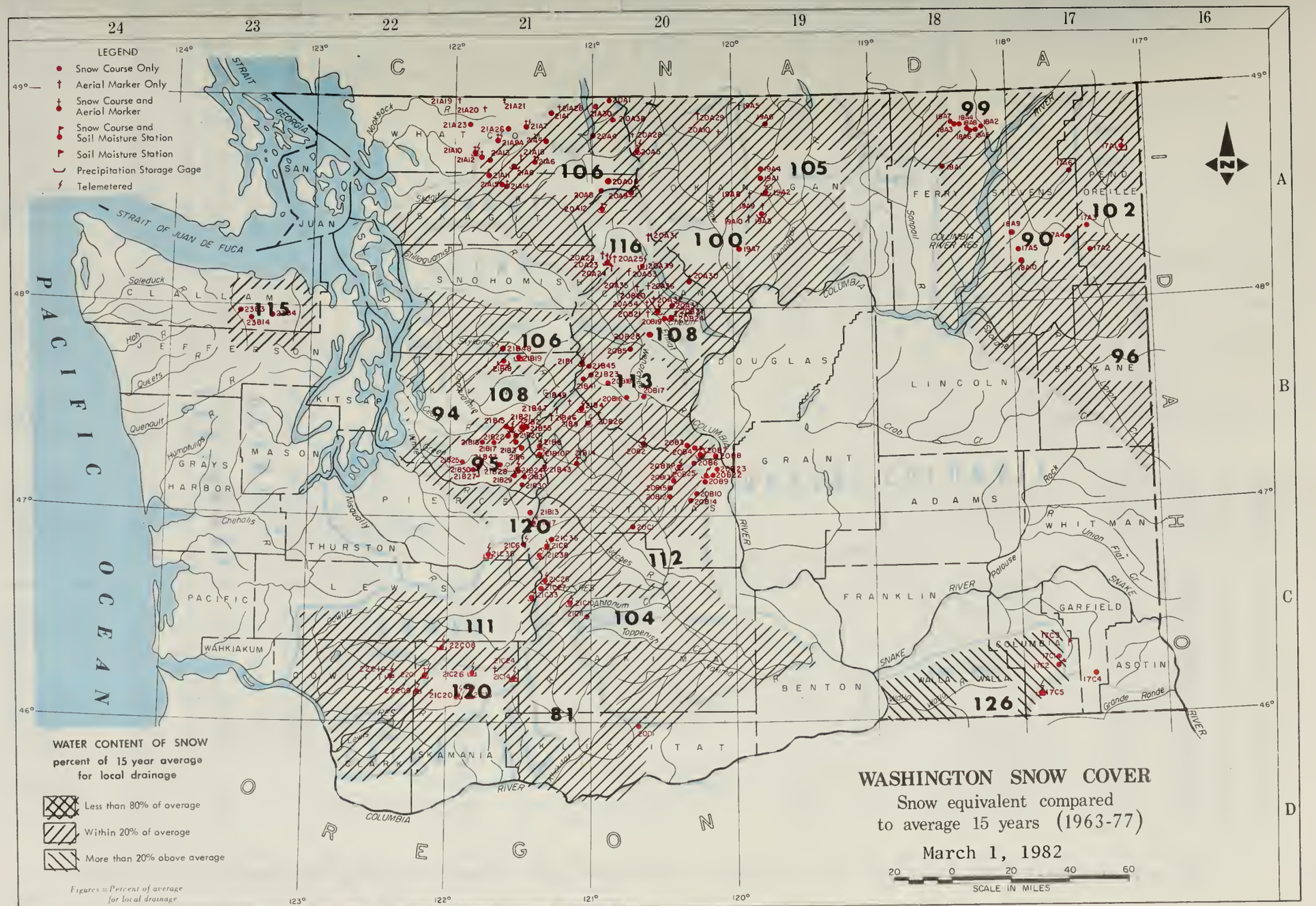
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cax Valley	23B14	31	29N	6W	4500

Elwha River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow



LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
WATER CONTENT OF SNOW
percent of 15 year average for local drainage
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
WASHINGTON SNOW COVER
Snow equivalent compared to average 15 years (1963-77)
March 1, 1982
SCALE IN MILES
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
COLUMBIA RIVER
SNAKE RIVER
WHATCOM
SAN JUAN
SKAGIT
SNOHOMISH
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
KITSAP
MASON
GRAYS HARBOR
PIERCE
THURSTON
LEWIS
PACIFIC
WAHKIAKUM
COWLITZ
CLARK
SKAMANIA
KLICKITAT
YAKIMA
KITTITAS
DOUGLAS
GRANT
LINCOLN
SPOKANE
ADAMS
WHITMAN
FRANKLIN
BENTON
GARFIELD
COLUMBIA
WALLA WALLA
ASOTIN
COLUMBIA RIVER RES
106
105
99
102
90
116
100
115
106
108
96
113
108
94
95
120
112
104
111
120
81
126

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970
Kettle River					
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Colville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Cheweloh	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370
Sonpoil River					
Shermon Creek Poss	18A1	19	36N	35E	5350
Okonogon River					
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2SP	33	37N	24E	4500
Storvation Mtn.	19A10a	15	35N	23E	6750
Touts Coulee	19A6	30	39N	25E	2845
Methow River					
Billy Goat Poss	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Horts Poss	20A5SP	7	37N	18E	6500
Horseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650
Chelon Lake Bosin					
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lymon Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbor	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Blue Creek G.S.	20828a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiot River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Comp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20821a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Poss No. 2	20B2 SP	35	22N	17E	4270
Chiwaukum G. S.	20816	4	25N	17E	1810
Lake Wenatchee	2085	33	27N	17E	1970
Leovenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Poss	21B1SP	14	26N	13E	4070
Stevens Poss Sond Shed	21845	12	26N	19E	3700
Trough #2	20825SP	10	20N	20E	5310
Colockum Creek					
Colockum Creek Upper	20822	11	20N	20E	5300
Colockum Creek Lower	20823	1	20N	20E	4300
Squilchuck Creek					
Beehive Springs	2083	12	21N	19E	4400
Scout-A-Vista	2084	18	21N	20E	3400
Stemilt Creek					
Jump-Off	2088	34	21N	20E	4450
Stemilt Slide	2086	30	21N	20E	5000
Upper Wheeler	2087SP	30	21N	20E	4400
Yokima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Poss	2089	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
High Creek	20812	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Loke Cle Elum	21B14M	15	20N	14E	2200
Lemoh Creek	21B47a	7	23N	13E	3327
Monostash	20C1	24	17N	16E	3935
Morse Loke	21C17SP	6	16N	11E	5400
Nonum	20813	4	20N	19E	3875
Troil Creek	20814	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20826a	16	23N	15E	5925
Wolters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Couse	17C3m	2	9N	40E	3370
Homestead	17C1	11	9N	40E	4030
Mortin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Touchet No. 2	17C5SP	6	7N	40E	5530
Klickitot River					
Sotus Poss	20D1	21	6N	17E	4030
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abrahom	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Coyuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Pototo Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Nisqually River					
Poradise Park (New)	21C35SP	13	15N	8E	5500
White River					
Corral Poss	21813SP	30	18N	11E	6000
Green River					
Airstrip	21824P	18	20N	11E	1800
Chorley Creek	21825	27	21N	8E	1200
Cougor Mountain	21842SP	21	21N	9E	3200
Grass Mountain No. 2	21827	14	20N	8E	2900
Grass Mountain No. 3	21828	12	20N	8E	2100
Lester Creek	21829	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B43SP	14	20N	11E	5000
Stompede Poss	21B10SP	25	21N	11E	3860
Twin Comp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gordner	21821P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washington	21B15P	8	22N	9E	3000
Rex River	21817P	11	21N	9E	2400
South Fork Cedar	2186P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400
Snoquolmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
South Fork Tolt	21B18P	26	26N	9E	1900
Ololie Meadows East	21B55SP	20	22N	11E	8700
Skykomish River					
Loke Elizobeth	21B19P	33	26N	10E	2900
Skogit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Poss	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Poss	21A6A	17	38N	11E	5400
Morten Loke	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
Nooksack River					
Bald Mountain	21A19a	7	40N	7E	4400
Canyon	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panorama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Morse Creek					
Cox Valley	23814	31	29N	6W	4500
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

March 1, 1982

Snow surveys taken around the first of March indicate again that the water supply outlook for the State of Washington is good. Near normal snowpacks were recorded and with the above normal rainfall measured in the lower elevation, the resultant runoff forecasts are for expected flows ranging from 6 percent below average to 30 percent above. There are no foreseeable problem areas.

SNOW COVER

A near normal snow cover was measured throughout the state and in tributary areas. The snowpack in the Upper Columbia portion of the state and tributaries is now 4 percent above average, 29 percent greater than was measured in 1980 and 133 percent greater than was measured last year. Along the Lower Columbia tributaries, the March 1 snow cover is 11 percent greater than average. In the Puget Sound area, the snow is 6 percent above normal.

RESERVOIRS

February runoff added considerable water to the storage of all reservoirs in the state and improved the outlook for summer water supplies. Four of the five reservoirs in the Yakima basin have normal or above amounts of water in storage. Water behind the Cle Elum dam is only 42 percent of the average and 27 percent of capacity. In the last five months, court ordered releases of over 80,000 acre-feet have been made from the irrigation reservoirs in the upper Yakima system. These releases are to maintain fish water in the upper tributaries. Power reservoirs such as Lake Roosevelt are being lowered to contain the spring runoff when it occurs in May and June, and others are holding their own to recover from last years deficits.

PRECIPITATION

Excellent rainfall occurred throughout the state and tributary areas except for the Okanogan drainage division. Precipitation in this area was only 88 percent of normal. Rainfall percentage ranged from 126 percent to 193 percent of normal with the greatest occurring along the east slopes and in the Yakima basin. Precipitation for the winter period of November through February is now above normal for all drainage divisions as reported by the National Weather Service.

STREAMFLOW

The only streamflow, as reported by the Current Records Center of the U. S. Geological Survey, that had a below normal outflow during February was the Similkameen River as measured at Nighthawk. This was 26 percent below normal. The greatest flows occurred on the Spokane River at 300 percent of normal and on the Palouse at 295 percent. Along the mainstem of the Columbia, excellent flows were measured with the Columbia at The Dalles reporting to have 176 percent of average. Forecasts of spring and summer runoff are generally for near normal outflows with the only subnormal amounts occurring in the Puget Sound drainages. The largest, percentagewise, is the forecast of Mill Creek at Walla Walla which is expected to flow 30 percent above normal during the April-September period. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - March, 1982

The following summarized runoff forecasts are based principally on mountain snowcover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. The forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1981 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1982	% 15-Yr. Avg.	Fore-cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-Yr. Average 63-77
COLUMBIA BASIN							
COLUMBIA RIVER SYSTEM							
Columbia River	49100	108	Apr-Sept	48531	40816	34484	45510
at Birchbank 1/	39300	108	Apr-July	38501	34085	27181	36358
	28300	108	Apr-June	27002	27623	19661	26197
Columbia River	74200	109	Apr-Sept	70303	61016	52769	68026
at Grand Coulee 1/	62200	109	Apr-July	58525	52320	44096	57050
	48300	109	Apr-June	44235	43871	35138	44280
Columbia River	81900	111	Apr-Sept	77308	66512	55298	73911
bl. Priest Rapids 1/	69300	111	Apr-July	64689	57767	46700	62444
	53800	111	Apr-June	49348	48667	37453	48479
Columbia River	117000	113	Apr-Sept	96997	93170	76843	103477
at The Dalles, OR 1/	100000	113	Apr-July	82171	79931	65758	88503
	80500	113	Apr-June	65104	68316	55016	71219
PEND OREILLE RIVER SYSTEM							
Pend Oreille River	17200	110	Apr-Sept	13896	13271	11639	15643
bl. Box Canyon	15800	110	Apr-July	13179	12116	11095	14334
	13500	110	Apr-June	11594	10776	10217	12277
KETTLE RIVER SYSTEM							
Kettle River	2030	110	Apr-Sept	2181	1835	1259	1845
nr. Laurier	1900	108	Apr-July	2039	1747	1216	1753
	1750	110	Apr-June	1711	1603	1132	1587
Colville River	155	116	Apr-Sept		116	63	134
at Kettle Falls	140	114	Apr-July		105	58	123
	130	113	Apr-June		97	55	115

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore-cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1970	15-Yr. Average 63-77
SPOKANE RIVER SYSTEM **							
Spokane River	3300	107	Apr-Sept	2238	2214	2809	2910
at Post Falls, ID 2/	3000	110	Apr-July	2145	2046	2757	2733
	2860	110	Apr-June	1960	1904	2678	2600
OKANOGAN RIVER SYSTEM							
Similkameen River	1650	109	Apr-Sept	1241	1479	872	1517
nr.Nighthawk	1490	105	Apr-July	1118	1391	812	1417
	1240	104	Apr-June	930	1247	728	1192
Okanogan River	1800	105	Apr-Sept		1551	909	1718
nr. Tonasket	1660	106	Apr-July	1363	1423	825	1564
	1380	106	Apr-June	1090	1240	730	1304
METHOW RIVER SYSTEM							
Methow River	1130	112	Apr-Sept		996	478	1011
nr. Pateros	1050	112	Apr-July		934	432	937
	850	107	Apr-June		811	382	791
CHELAN RIVER SYSTEM							
Chelan River	1350	109	Apr-Sept	917	1120	753	1238
at Chelan 3/	1190	110	Apr-July	812	1020	662	1080
	920	110	Apr-June	647	859	553	834
Stehekin River	980	111	Apr-Sept			566	883
at Stehekin	830	112	Apr-July			477	744
	620	112	Apr-June			387	557
Entiat River	290	120	Apr-Sept		216	134	241
nr. Ardenvoir	260	119	Apr-July		200	120	218
	210	121	Apr-June		172	104	174
WENATCHEE RIVER SYSTEM							
Wenatchee River	1500	116	Apr-Sept			893	1297
at Plain	1330	115	Apr-July			812	1156
	1030	114	Apr-June			704	903
Wenatchee River	2100	119	Apr-Sept	1249	1516	1165	1767
at Peshastin	1870	118	Apr-July	1148	1399	1074	1586
	1450	116	Apr-June	956	1208	938	1250
Stemilt Basin	130*	94	May-Sept				138*
nr. Wenatchee							
Icicle Creek	400	108	Apr-Sept				371
nr. Leavenworth	370	108	Apr-July				342
	300	108	Apr-June				279

* Thousands of Miners' Inches.

** Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane valley farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
YAKIMA RIVER SYSTEM							
Yakima River	160	110	Apr-Sept	95	115	124	144
nr. martin 4/	145	109	Apr-July	82	103	114	133
	125	110	Apr-June	73	95	101	114
Yakima River	1075	110	Apr-Sept	700	792	714	975
at Cle Elum 5/	970	110	Apr-July	643	716	683	882
	830	111	Apr-June	563	646	599	750
Yakima River	2350	108	Apr-Sept	1194	1833	1388	2168
nr. Parker 6/	2110	108	Apr-July	1059	1733	1287	1954
	1810	107	Apr-June	961	1610	1179	1693
Kachess River	145	115	Apr-Sept	81	111	101	126
nr. Easton 7/	135	113	Apr-July	72	105	95	119
	115	112	Apr-June	66	91	88	103
Cle Elum River	555	115	Apr-Sept	313		348	479
nr. Roslyn 8/	500	115	Apr-July	282	350	326	435
	410	115	Apr-June	244	314	292	358
Bumping River	150	103	Apr-Sept	78	129	99	146
nr. Nile 9/	135	102	Apr-July	70	120	92	132
	110	104	Apr-June	63	111	82	106
American River	130	102	Apr-Sept			81	127
nr. Nile	120	103	Apr-July			74	116
	100	105	Apr-June			66	95
Tieton River	275	110	Apr-Sept	148	224	179	252
at Tieton Dam 10/	230	108	Apr-July	131	192	148	212
	180	107	Apr-June	108	166	120	168
Naches River	950	106	Apr-Sept	419	729	574	893
nr. Naches 11/	850	105	Apr-July	380	694	528	806
	720	106	Apr-June	339	638	478	678
Ahtanum Creek	50	106	Apr-Sept				47
nr. Tampico 12/	45	107	Apr-July				42
	40	108	Apr-June				37

4/ Observed flow corrected for storage in Lake Keechelus.
5/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.
6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.
7/ Observed flow corrected for storage in Lake Kachess.
8/ Observed flow corrected for storage in Lake Cle Elum.
9/ Observed flow corrected for storage in Bumping Lake.
10/ Observed flow corrected for storage in Rimrock Lake.
11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.
12/ Observed flow of North and South Forks (Combined).

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Forecast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
LOWER COLUMBIA RIVER SYSTEM							
Mill Creek	22.8	130	Apr-Sept			22.37	17.50
at Walla Walla	22.5	130	Apr-July			22.25	17.33
	22.3	130	Apr-June			22.14	17.15
Lewis River	1500	116	Apr-Sept	1096	1001	962	1298
at Ariel 13/	1300	115	Apr-July	971	883	830	1128
	1150	116	Apr-June	865	798	749	992
Cowlitz River	2450	115	Apr-Sept		1626	1563	2126
bl. Mayfield Dam	2150	116	Apr-July		1432	1367	1854
	1800	116	Apr-June		1275	1203	1553
Cowlitz River	3100	112	Apr-Sept	2390	1976	2046	2766
at Castle Rock 14/	2700	112	Apr-July	2125	1852	1792	2401
	2300	113	Apr-June	1875	1649	1574	2029
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
Dungeness River	180	113	Apr-Sept			110	160
nr. Sequim	145	112	Apr-July			90	130
	105	109	Apr-June			71	96
PUGET SOUND							
SKAGIT RIVER SYSTEM							
Skagit River	2750	109	Feb-Aug			1785	2532
at Newhalem 15/	2500	106	Apr-Sept			1648	2356
	2090	106	Apr-July			1359	1972
	1600	108	Apr-June			1102	1485
GREEN RIVER SYSTEM							
Green River	300	95	Apr-Sept				316
bl. Howard Hanson Dam 16/	270	95	Apr-July				284
	250	98	Apr-June				256
CEDAR RIVER SYSTEM							
Cedar River	90	97	Apr-Sept				93
nr. Cedar Falls							
ELWHA RIVER SYSTEM							
Elwha River	580	105	Apr-Sept			404	553
nr. Port Angeles	475	105	Apr-July			330	454

13/ Observed flow corrected for storage in Lake Merwin, Yale, and Swift Reservoirs.
14/ Observed flow corrected for storage in Mayfield Reservoir.
15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.
16/ Observed flow corrected for storage in Howard Hanson Dam.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured March 1 1982	1981	1980	Normal
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	433.7	217.5	79.5	121.6
Columbia	Franklin D. Roosevelt Lake	5232.0	4049.4	4813.9	2209.6	2681.2
Columbia	Banks Lake	714.9	706.9	538.0	701.5	621.3
Okanogan	Conconully Reservoir	13.0	10.2	7.8	3.5	6.7
Okanogan	Conconully Lake	10.5	8.9	10.4	8.3	7.5
Chelan	Lake Chelan	676.1	269.4	437.3	168.4	235.5
		YAKIMA				
Yakima	Keechelus Lake	157.8	121.8	143.4	78.3	105.4
Kachess	Kachess Lake	239.0	182.1	204.1	76.9	183.0
Cle Elum	Lake Cle Elum	436.9	118.7	267.3	363.3	280.2
Bumping	Bumping Lake	33.7	16.5	32.5	15.8	8.7
Tieton	Rimrock Lake	198.0	153.6	197.5	68.4	125.3
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	799.4	1287.6	627.2	894.0
Skagit	Diablo Reservoir	90.6	84.3	85.2	85.0	85.2
Skagit	Gorge Reservoir	9.8	7.6	8.0	7.5	8.1

1/ Based on Active Storage

* 15-yr. Average 1963-1977

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about March 1, 1982, as percent of the same date in 1981 and 1980 and average of record.

Tributary Basin	No. of Courses Average	1982 Snow Water Expressed as percent of 1981	1980	1963-77 Avg.
UPPER COLUMBIA BASIN				
Pend Oreille	16	433	142	102
Kettle	16	158	131	99
Colville	4	290	118	90
Spokane	12	266	177	96
Okanogan	39	167	140	105
Methow	8	134	112	100
Chelan	5	179	137	116
Entiat	10	163	130	108
Wenatchee	10	304	132	113
Yakima	24	330	124	112
Ahtanum	2	146	86	104
LOWER COLUMBIA BASIN				
Mill Creek	3	275	154	126
Klickitat	1	-	103	81
Lewis	2	-	-	120
Cowlitz	1	451	135	111
White Salmon	1	-		119
PUGET SOUND				
Cedar	2	-	220	94
White	1	208	126	120
Green	10	956	206	95
Snoqualmie	2	878	266	108
Skykomish	2	340	146	106
Skagit	15	312	156	106
Baker	9	584	228	117
OLYMPIC PENINSULA				
Morse Creek	1	486	197	115
Elwha	1	1068	290	100
Dungeness	1	491	213	126

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	FALL Sept-Oct Observed	FALL 1981 2/ Departure	WINTER Nov. 1981 - Feb. 1982 Observed	WINTER 2/ Departure
Columbia in Canada	5.17	+0.15	13.91	+1.36
Pend Oreille - Spokane	3.56	-0.48	16.26	+1.24
Northeastern Washington	3.28	+0.80	8.50	+0.39
Southeastern Washington	3.03	+0.52	10.76	+1.94
East Slope Cascades	4.87	+0.12	29.23	+5.03
North Central Washington	2.61	+1.02	5.84	+0.06
Northwest Slope Cascades	13.88	+0.67	52.46	+5.36
Southwest Slope Cascades	9.98	+1.30	38.86	+3.38

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages.

East Slope Cascades - Yakima, Wenatchee and Chelan Drainages.

North Central Washington - Methow and Okanogan Drainages.

Northwest Slope Cascades - Puget Sound Drainages.

Southwest Slope Cascades - Lower Columbia Drainages.

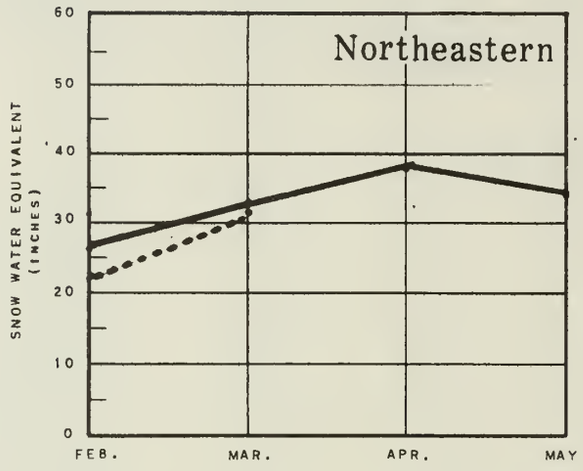
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

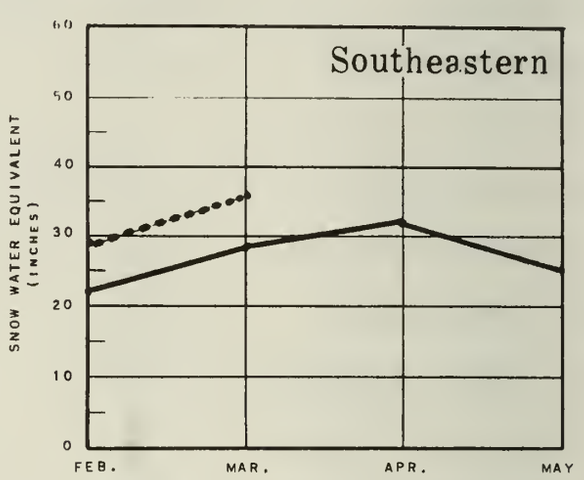
2/ - Departure from 15-year (1958-72) drainage division average.

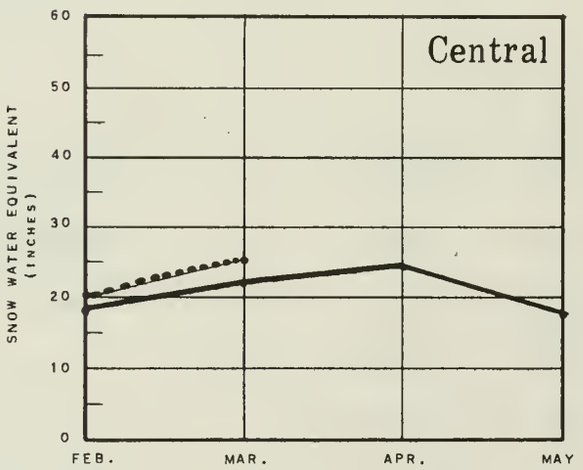
WASHINGTON SNOW COVER

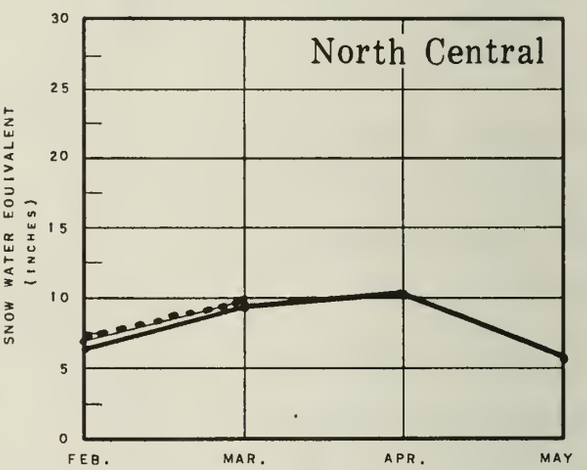
1982

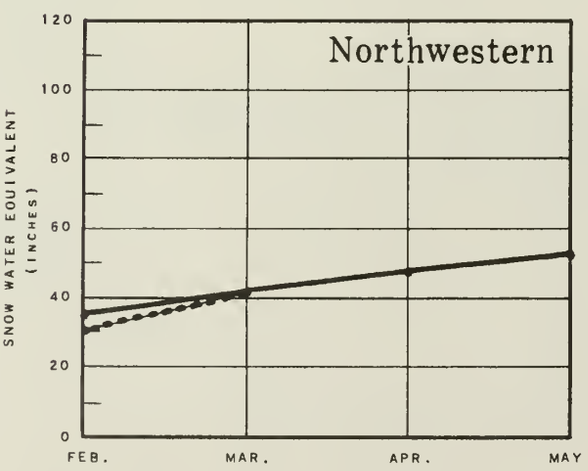
DRAINAGE AREAS

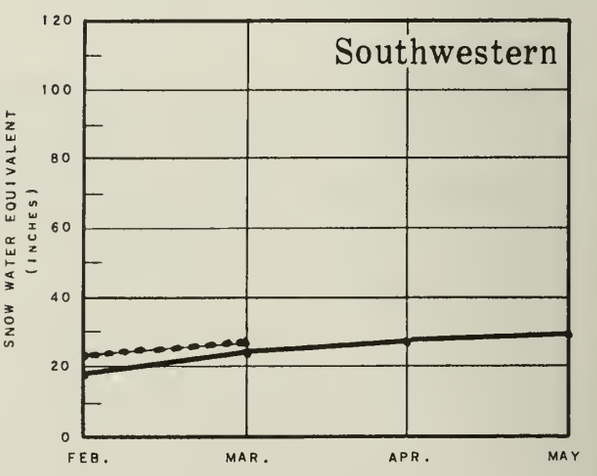












Average ——
1982 - - - - -

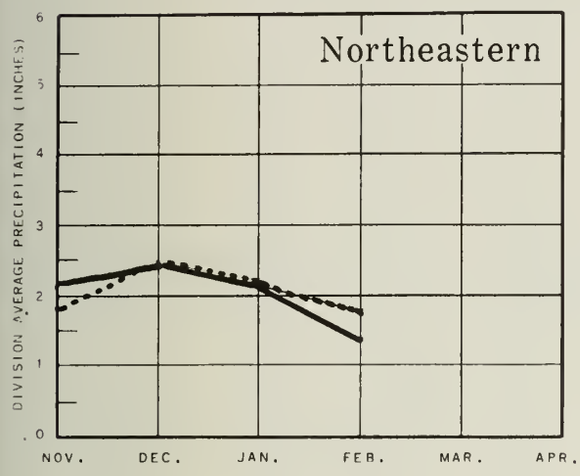
Selected Snow Survey Courses by Soil Conservation Service

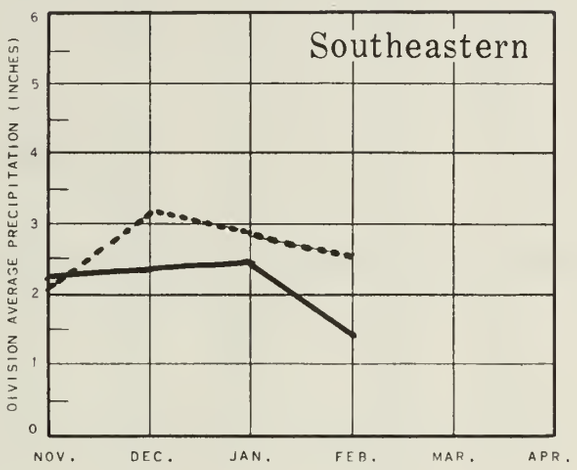
M7-L-22028G

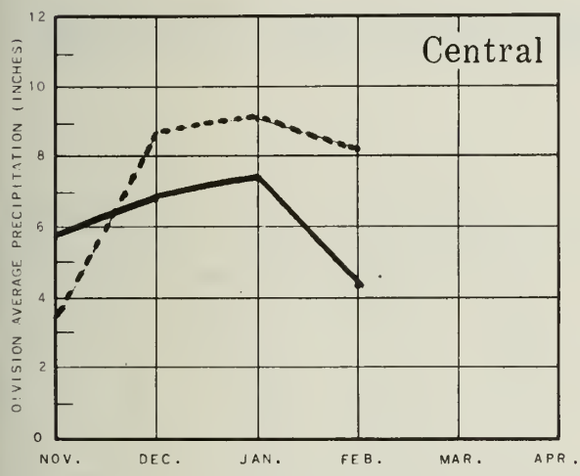
WASHINGTON VALLEY PRECIPITATION

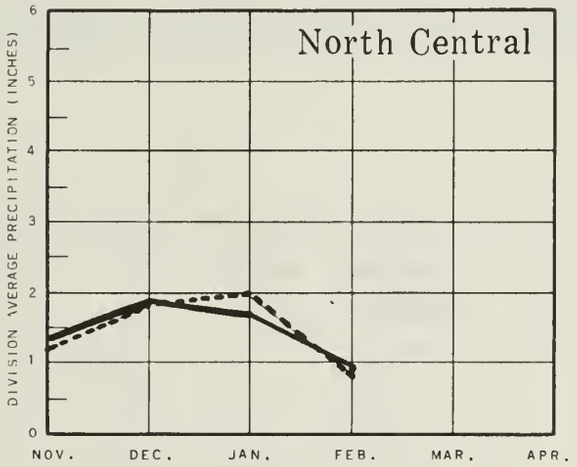
1982

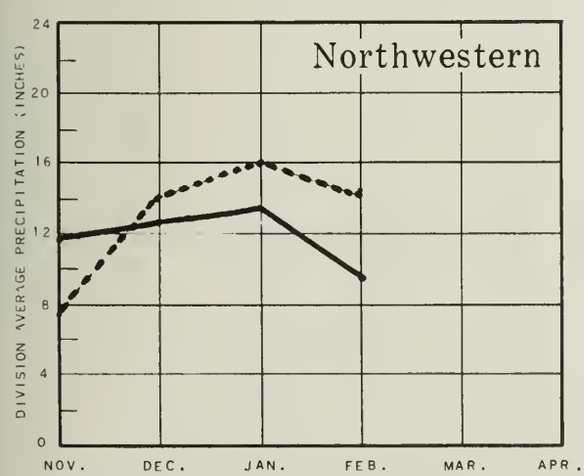
DRAINAGE AREAS

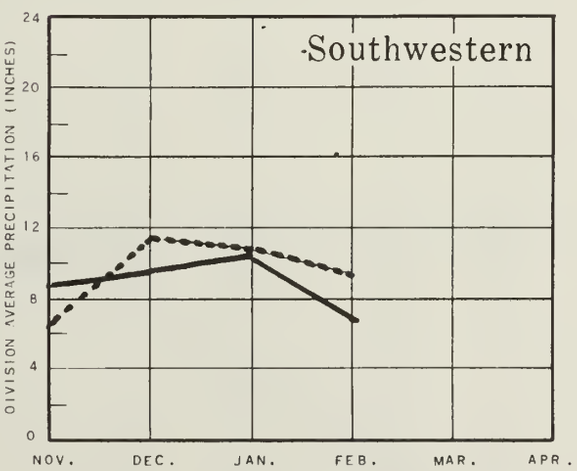






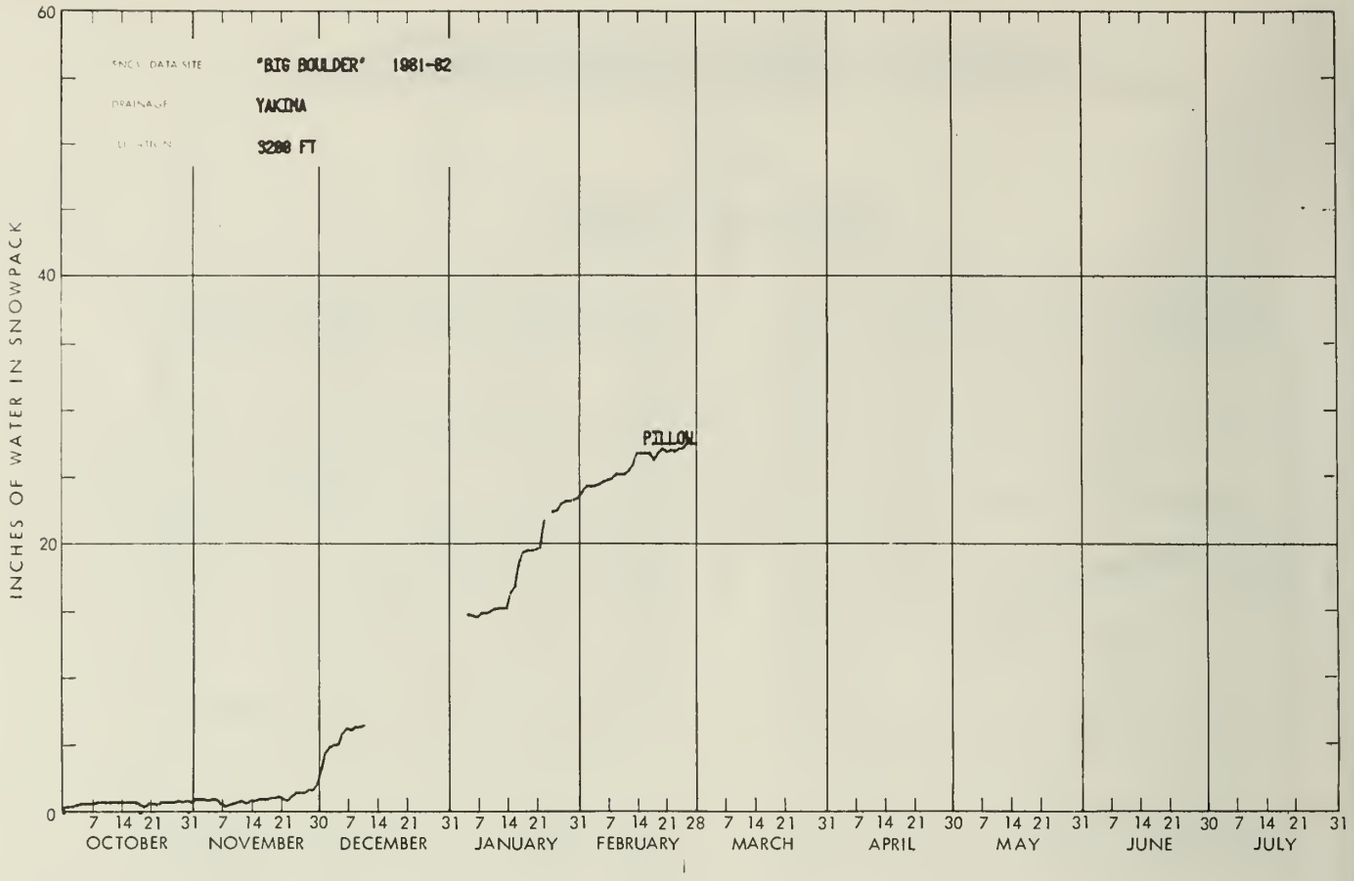






Average: ——————
1982 : - - - - - - - -

Preliminary Analysis by National Weather Service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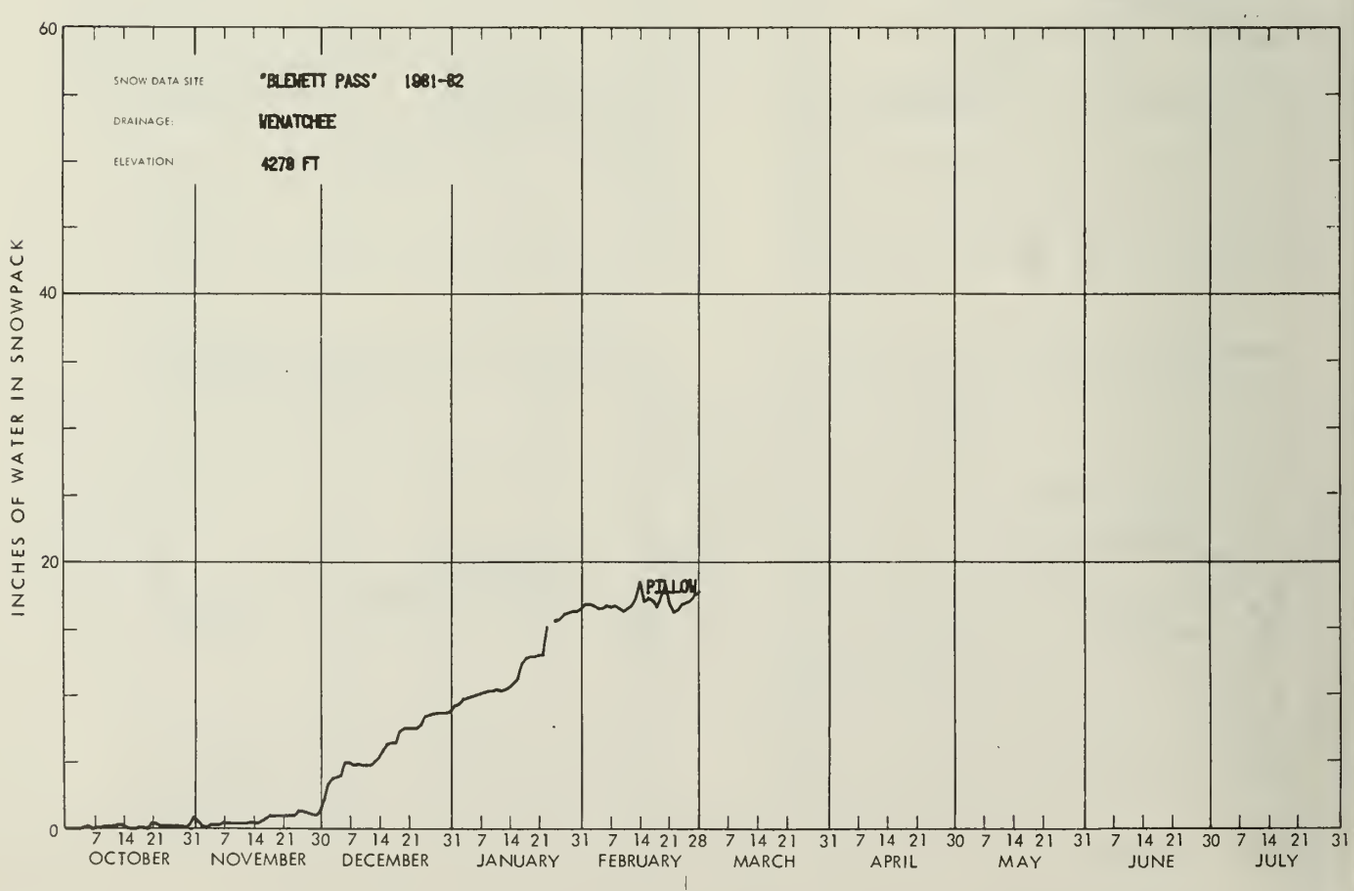
DRAINAGE YAKIMA
ELEVATION 3200 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE "BLEWETT PASS" 1981-82
DRAINAGE: WENATCHEE
ELEVATION 4270 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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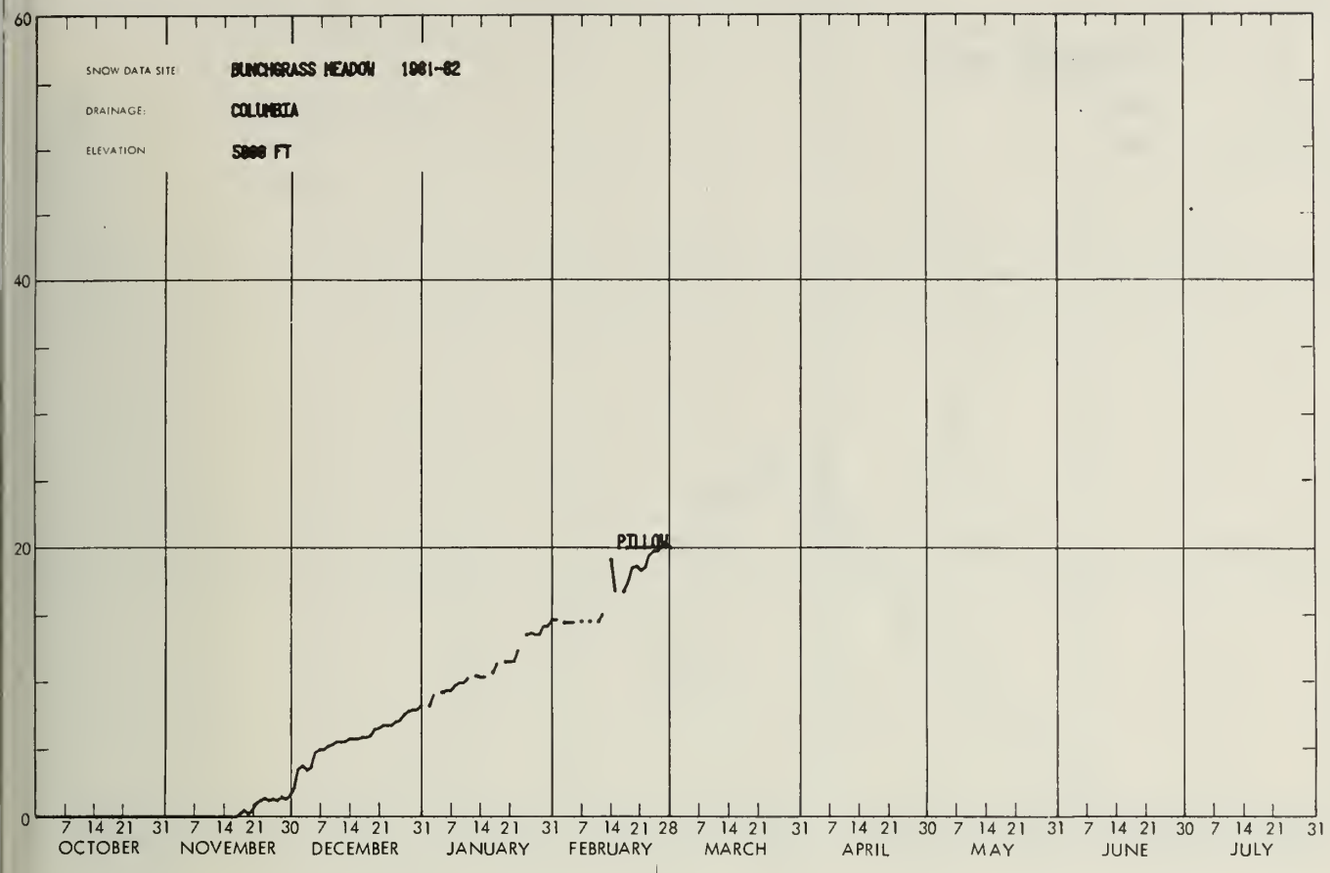
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DRAINAGE: COLUMBIA
ELEVATION: 5000 FT
PILLOW
60
40
20
0
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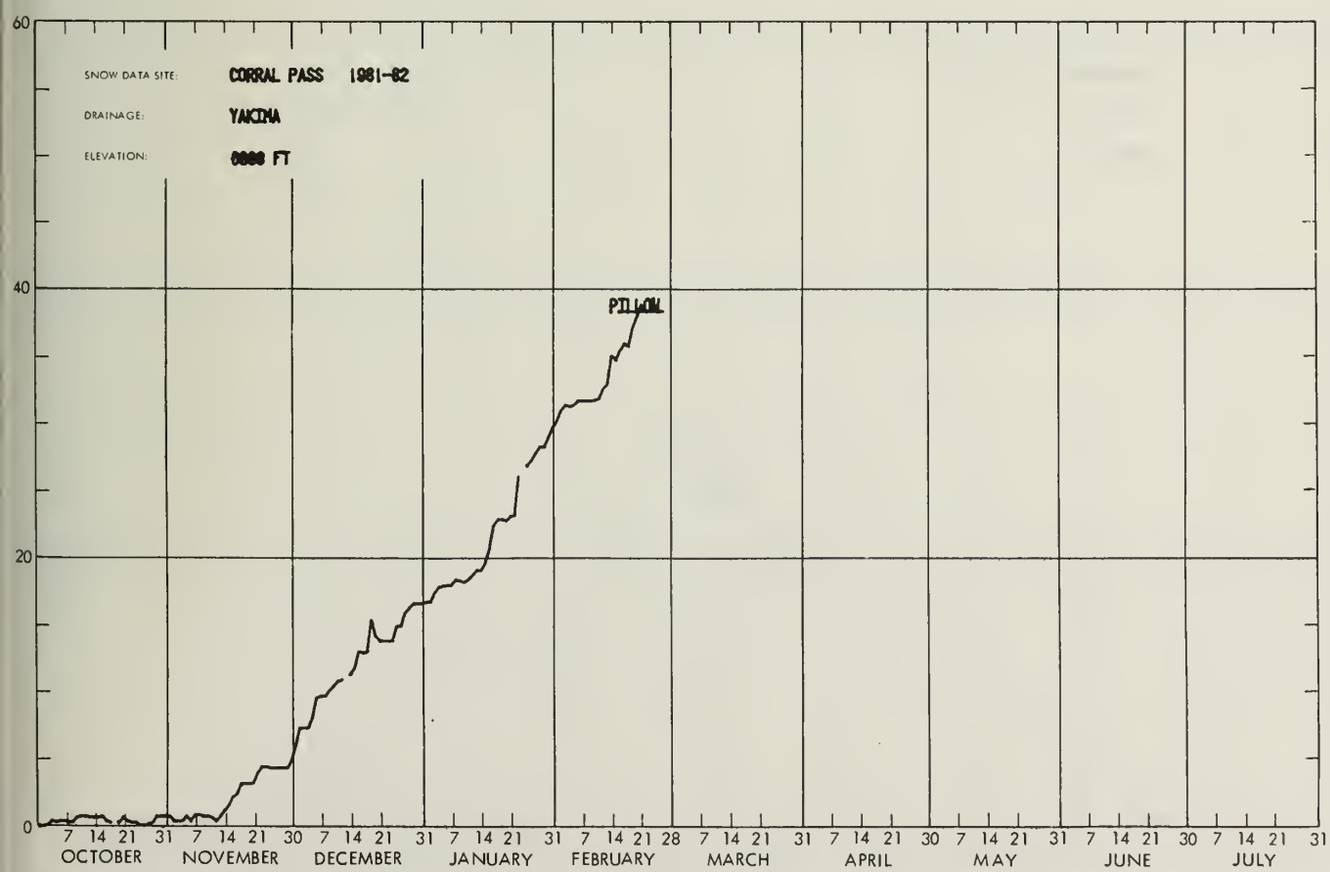
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY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DRAINAGE: YAKIMA
ELEVATION: 6000 FT
PILLOW
60
40
20
0
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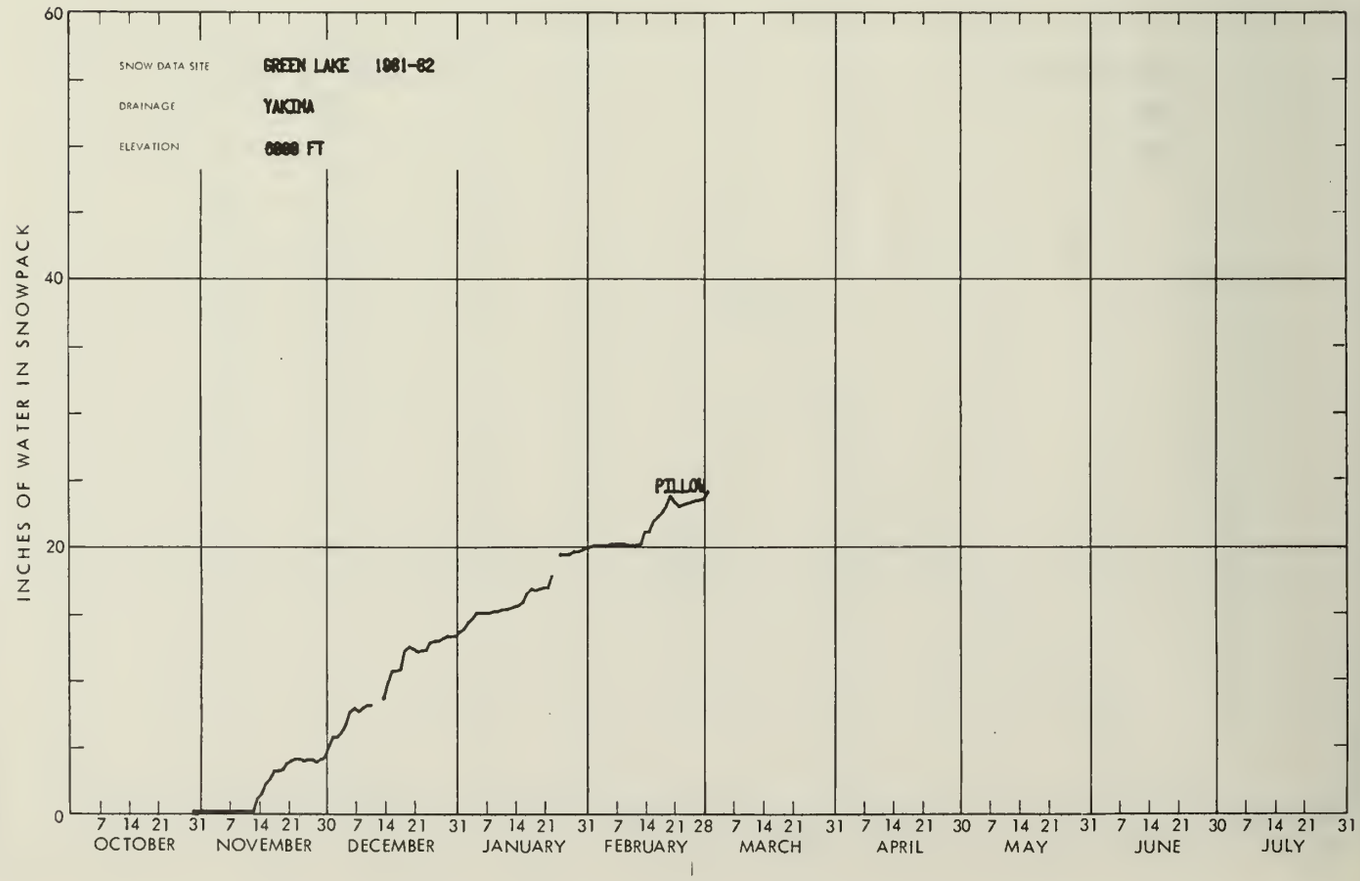
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

SNOW DATA SITE
COUGAR MOUNTAIN 1981-1982
DRAINAGE
GREEN
ELEVATION
3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
GREEN LAKE 1981-82
DRAINAGE
YAKIMA
ELEVATION
6000 FT
PILLOW
INCHES OF WATER IN SNOWPACK
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20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
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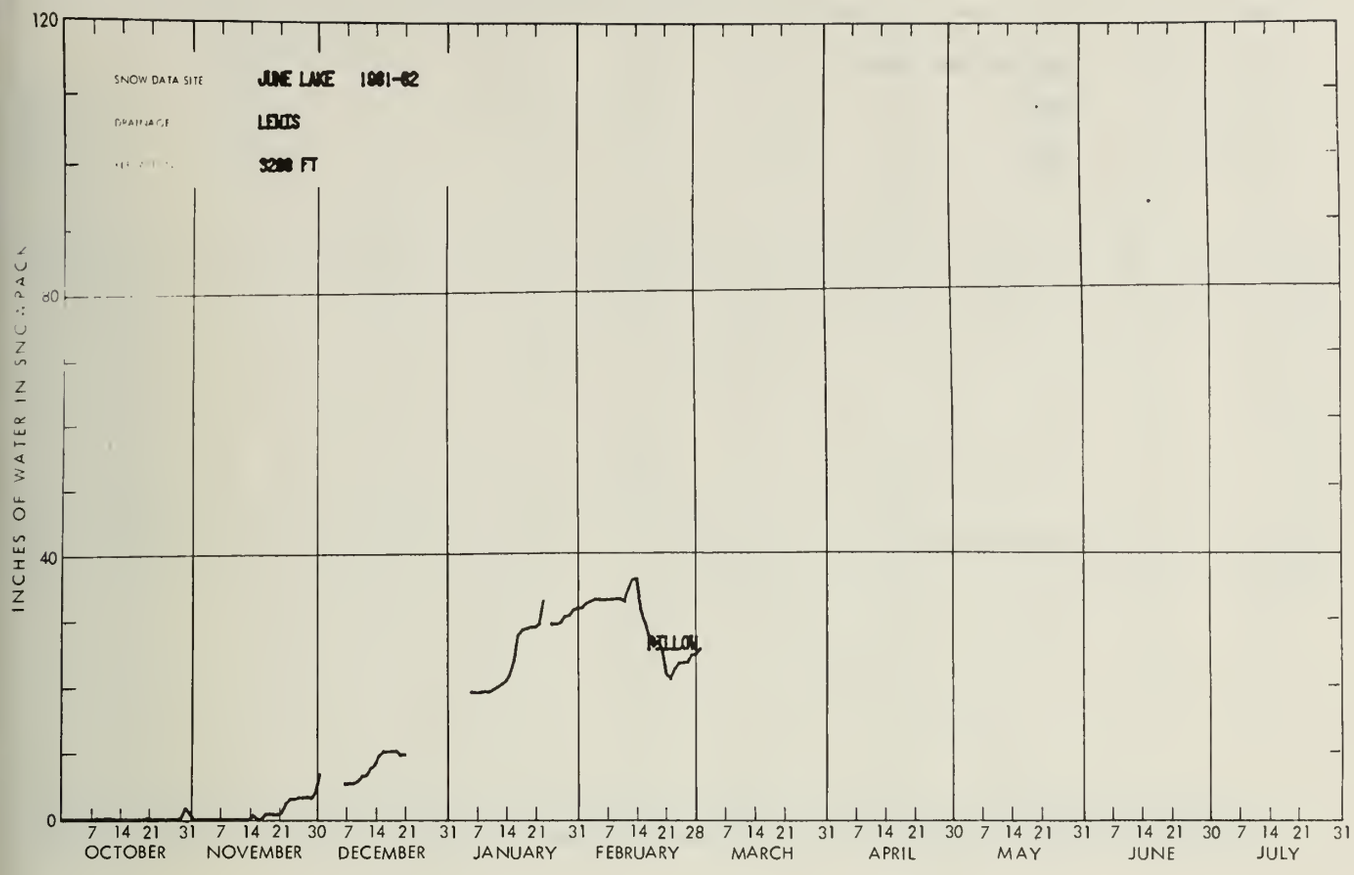
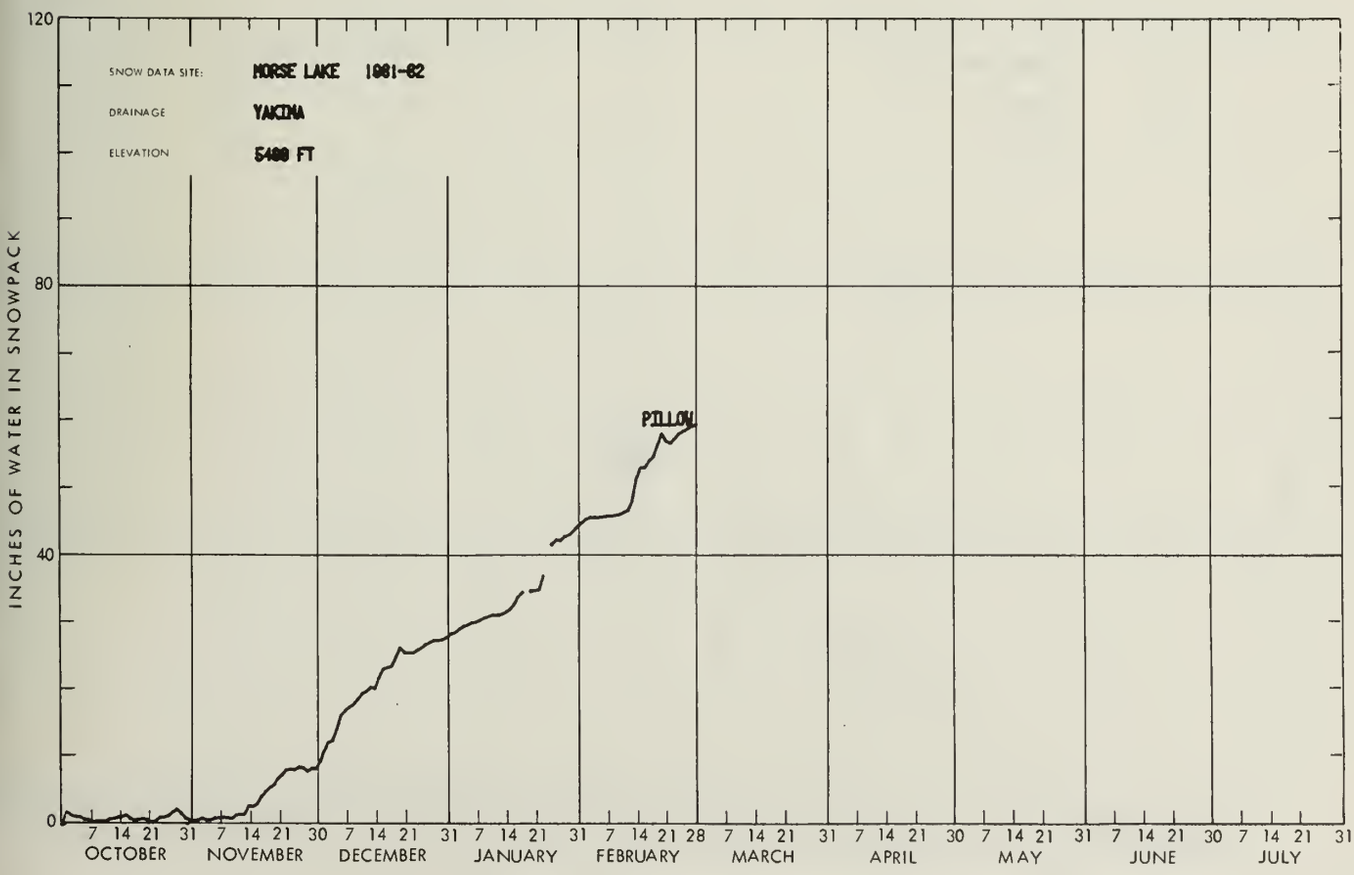
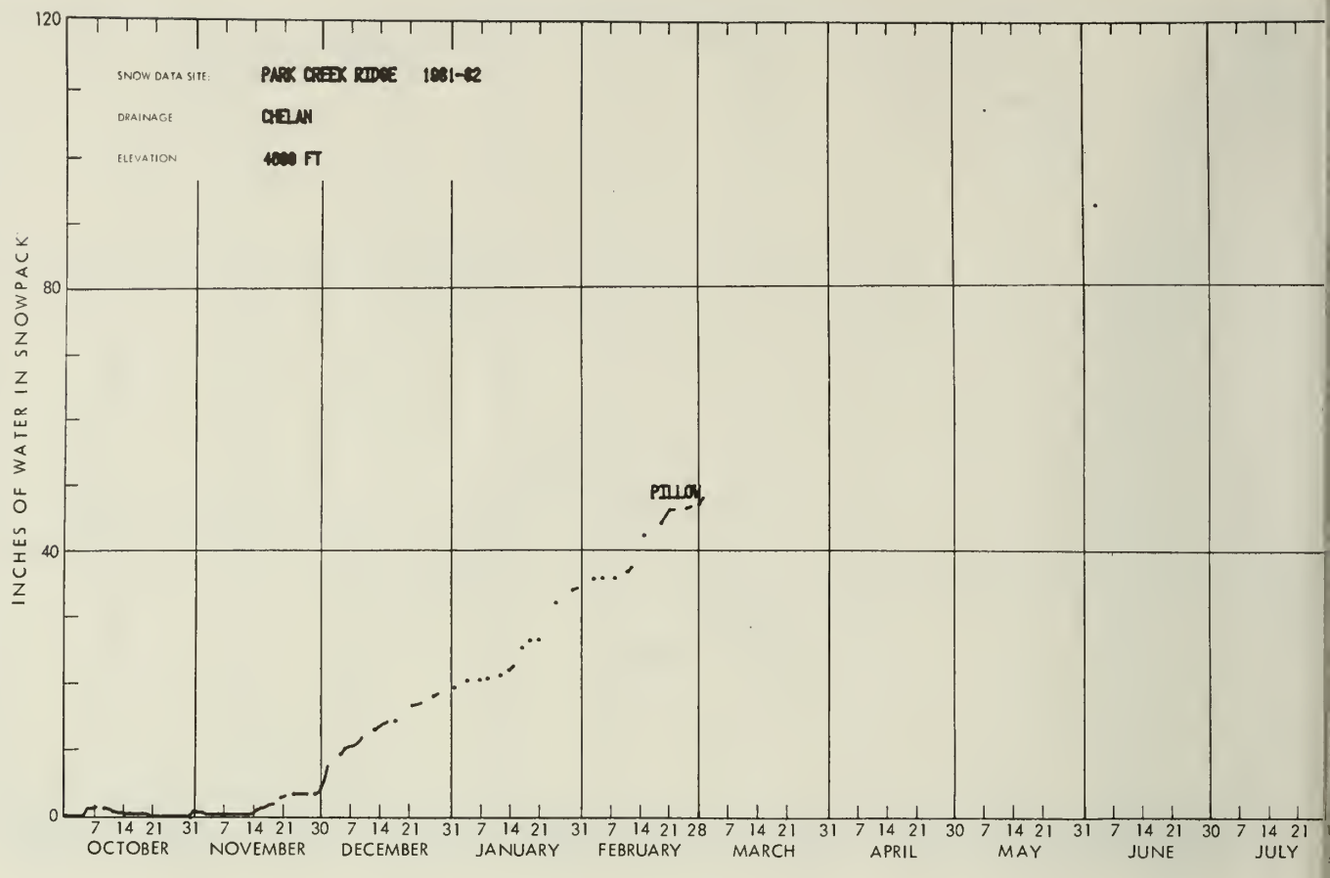
MARCH
APRIL
MAY
JUNE
JULY

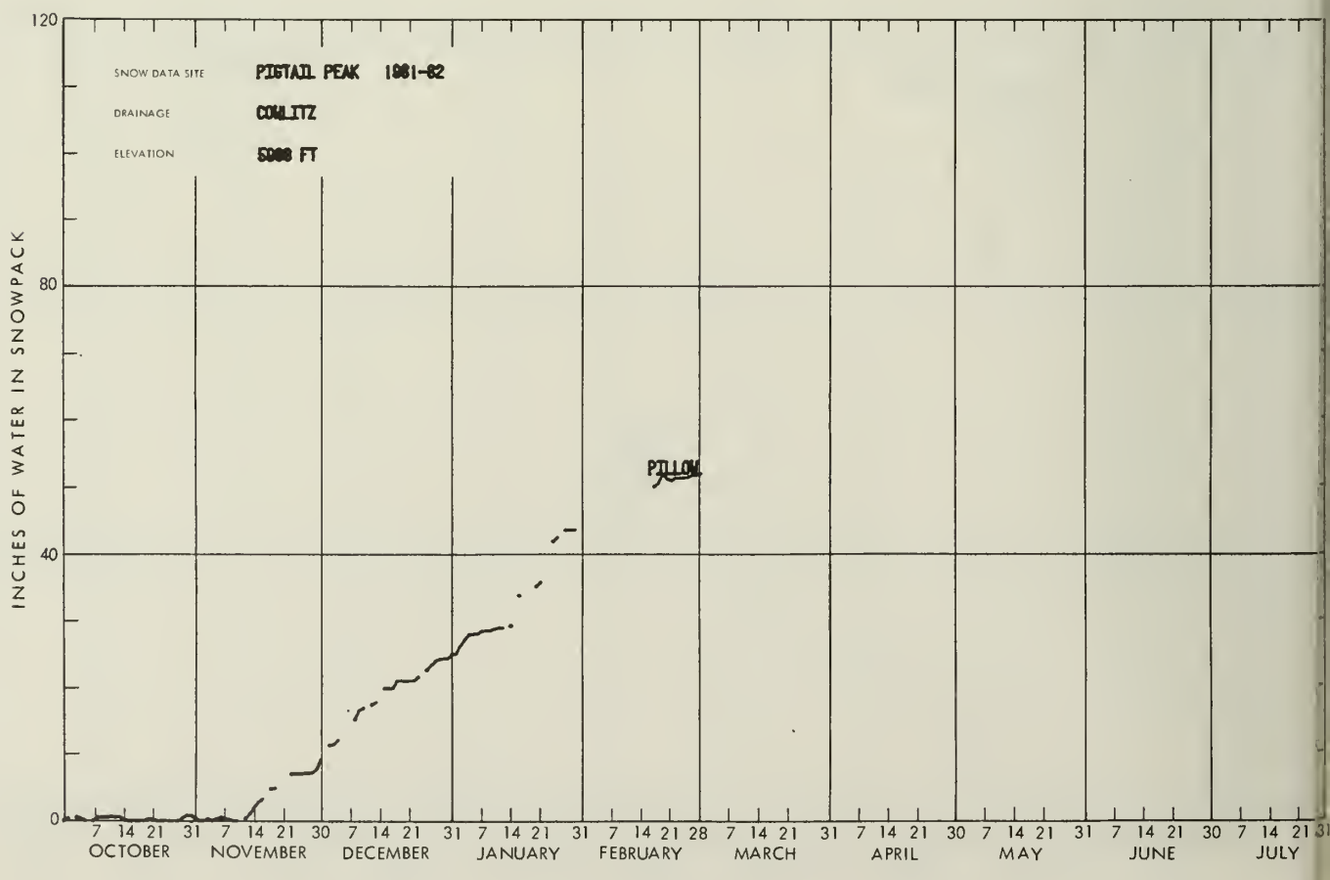
WSFB-X13D

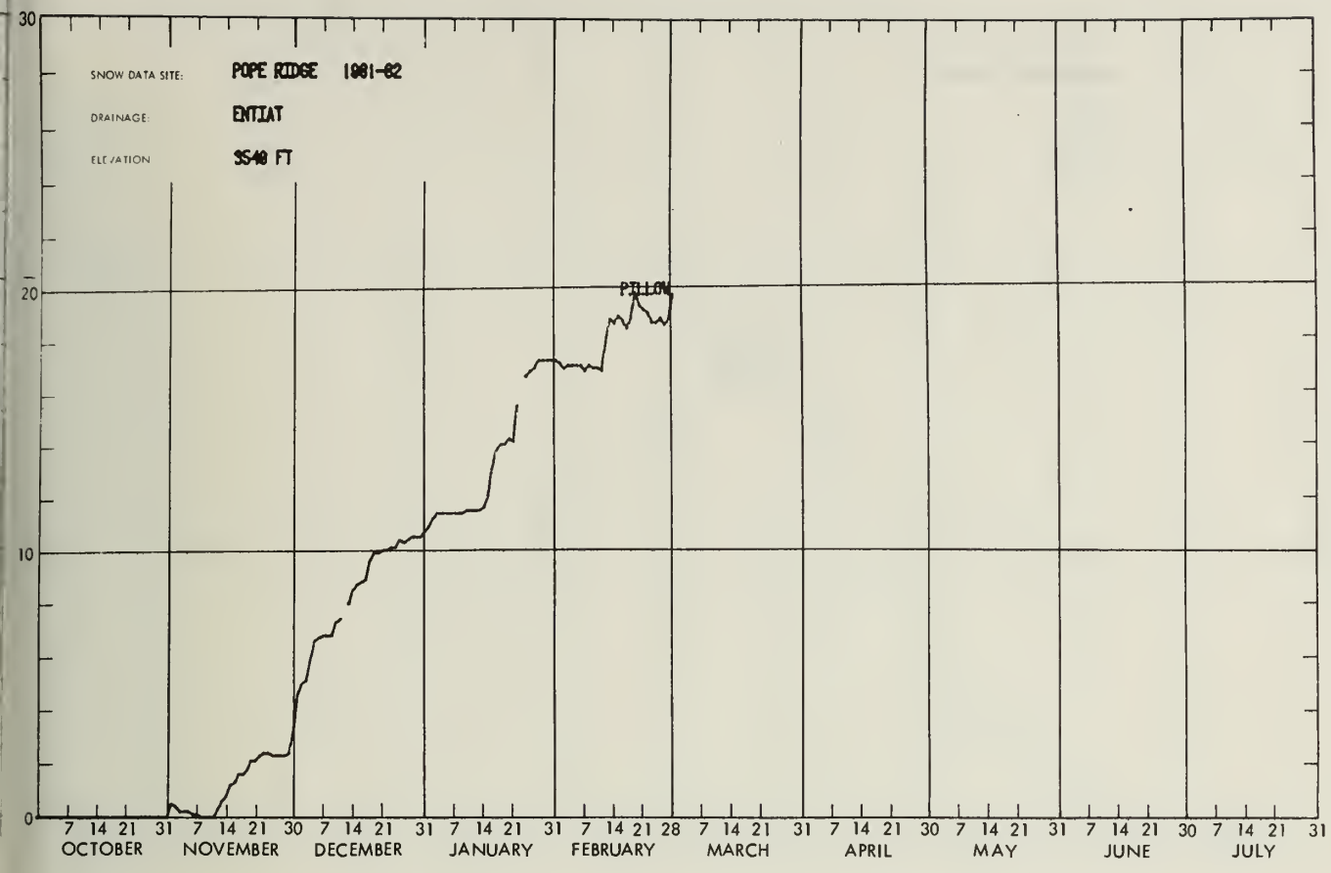

SNOW DATA SITE
JUNE LAKE 1981-82
DRAINAGE
LEWIS
ELEVATION
3200 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

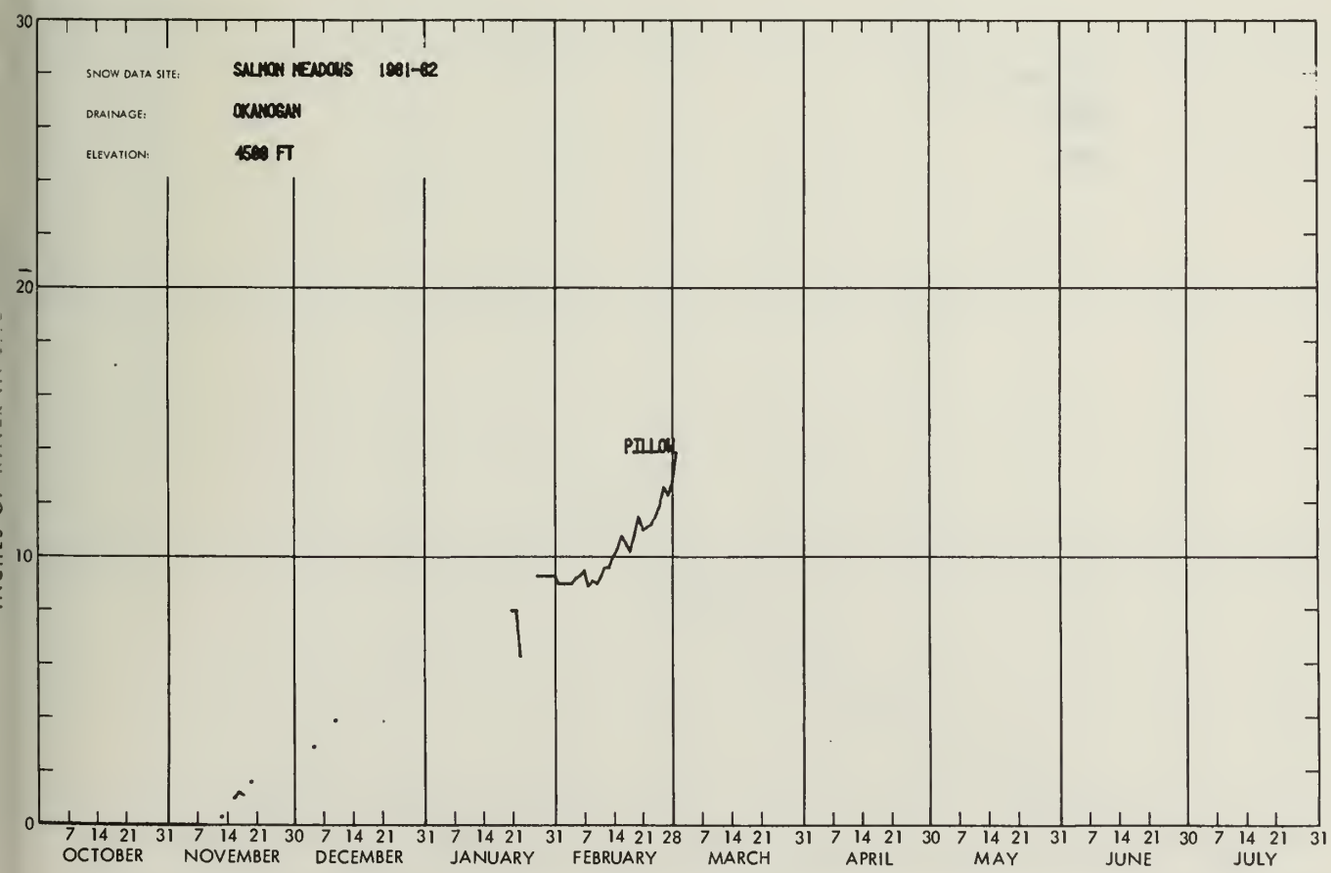

SNOW DATA SITE:
MORSE LAKE 1981-82
DRAINAGE
YAKIMA
ELEVATION
5400 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

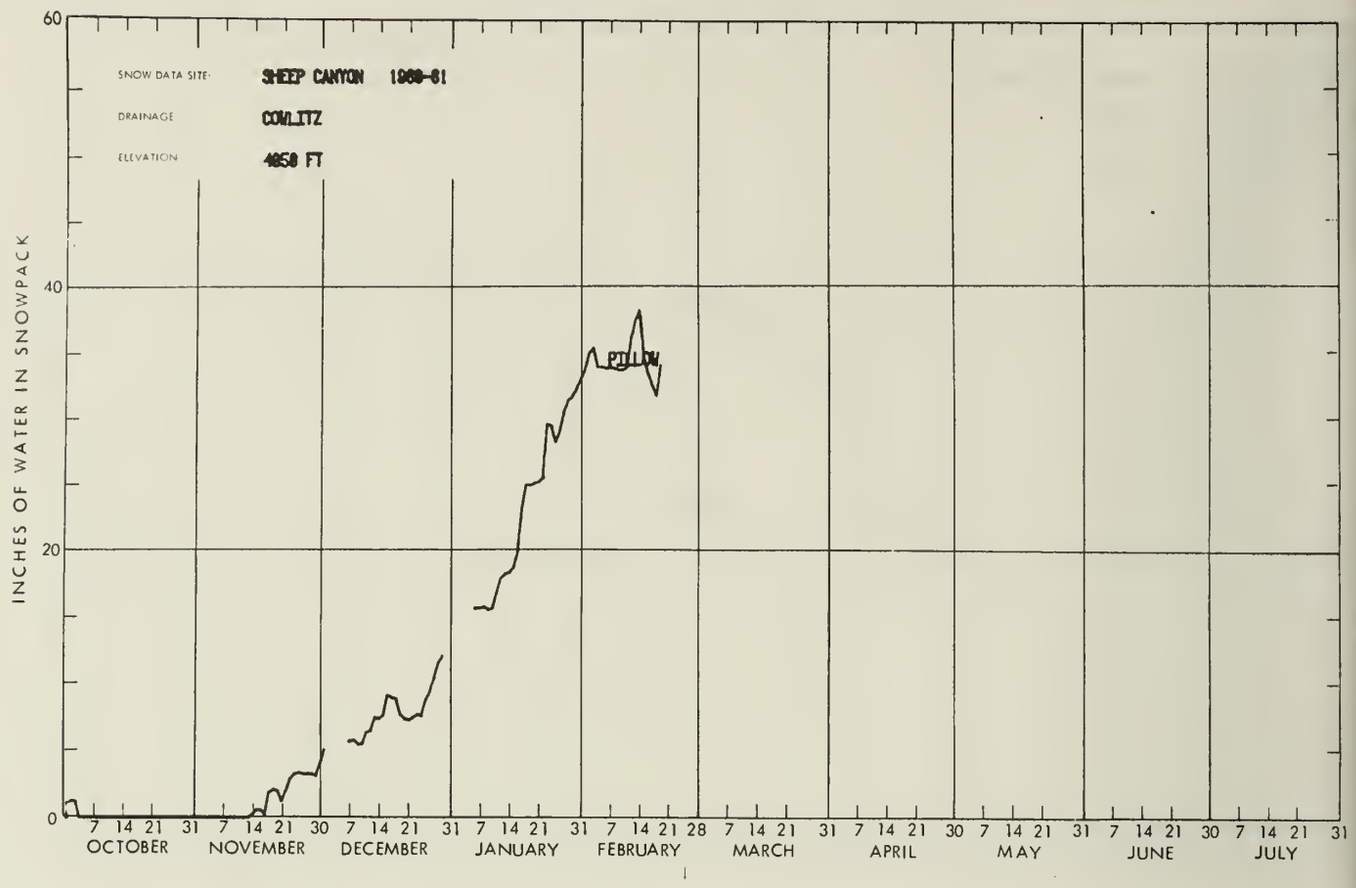
WSFB-X13D

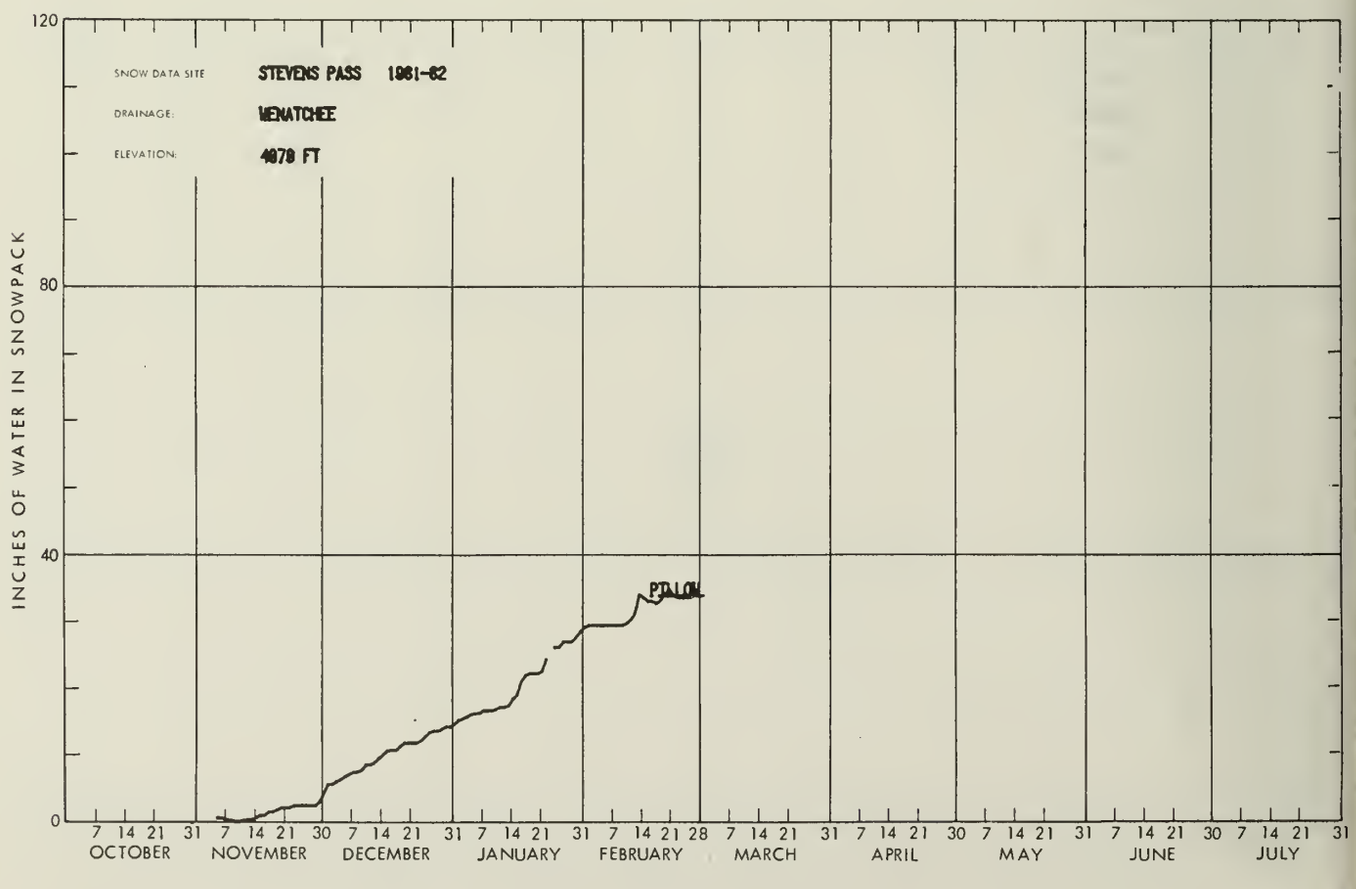

SNOW DATA SITE: PARK CREEK RIDGE 1981-82
DRAINAGE CHELAN
ELEVATION 4000 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

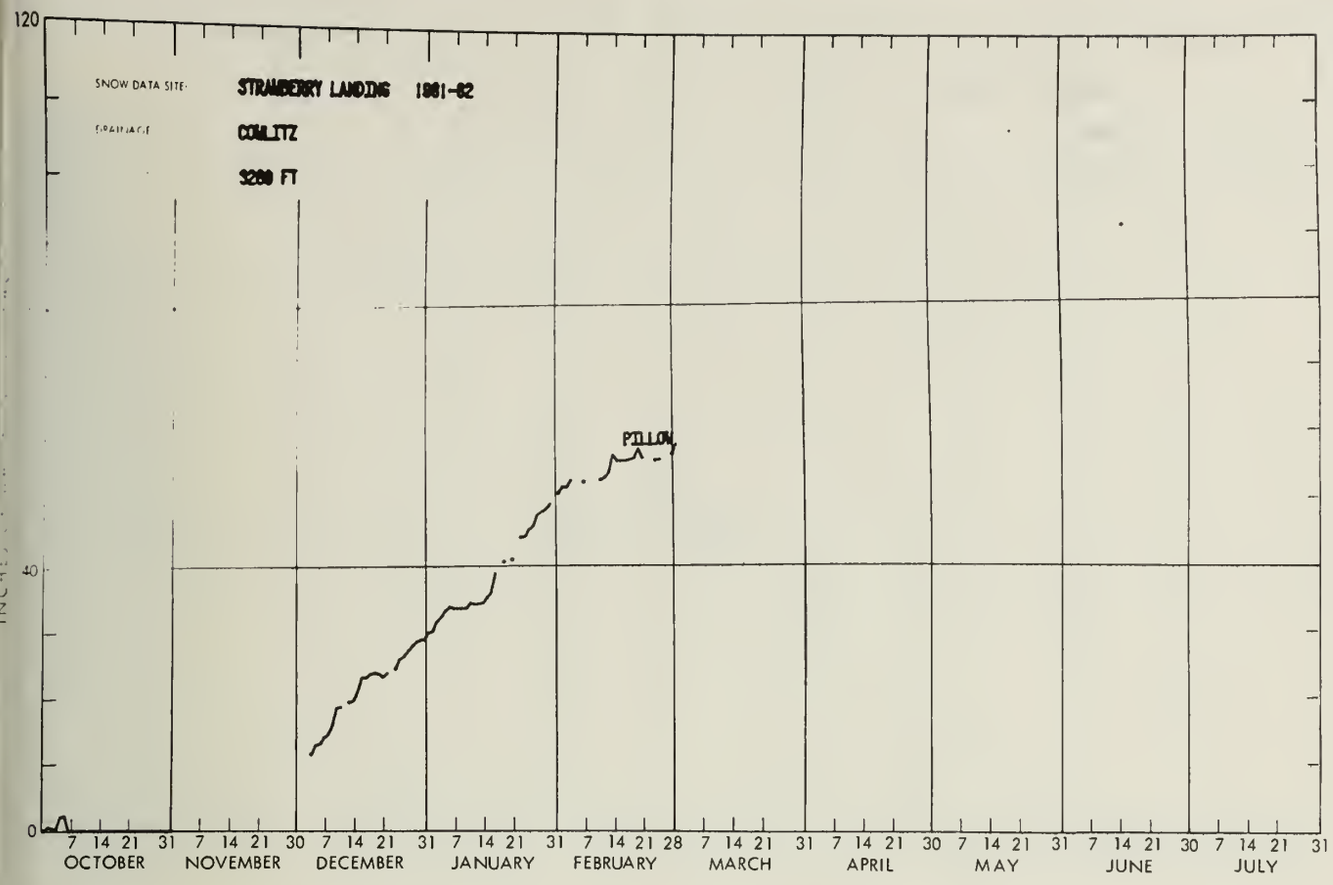

SNOW DATA SITE PIGTAIL PEAK 1981-82
DRAINAGE COWLITZ
ELEVATION 5000 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

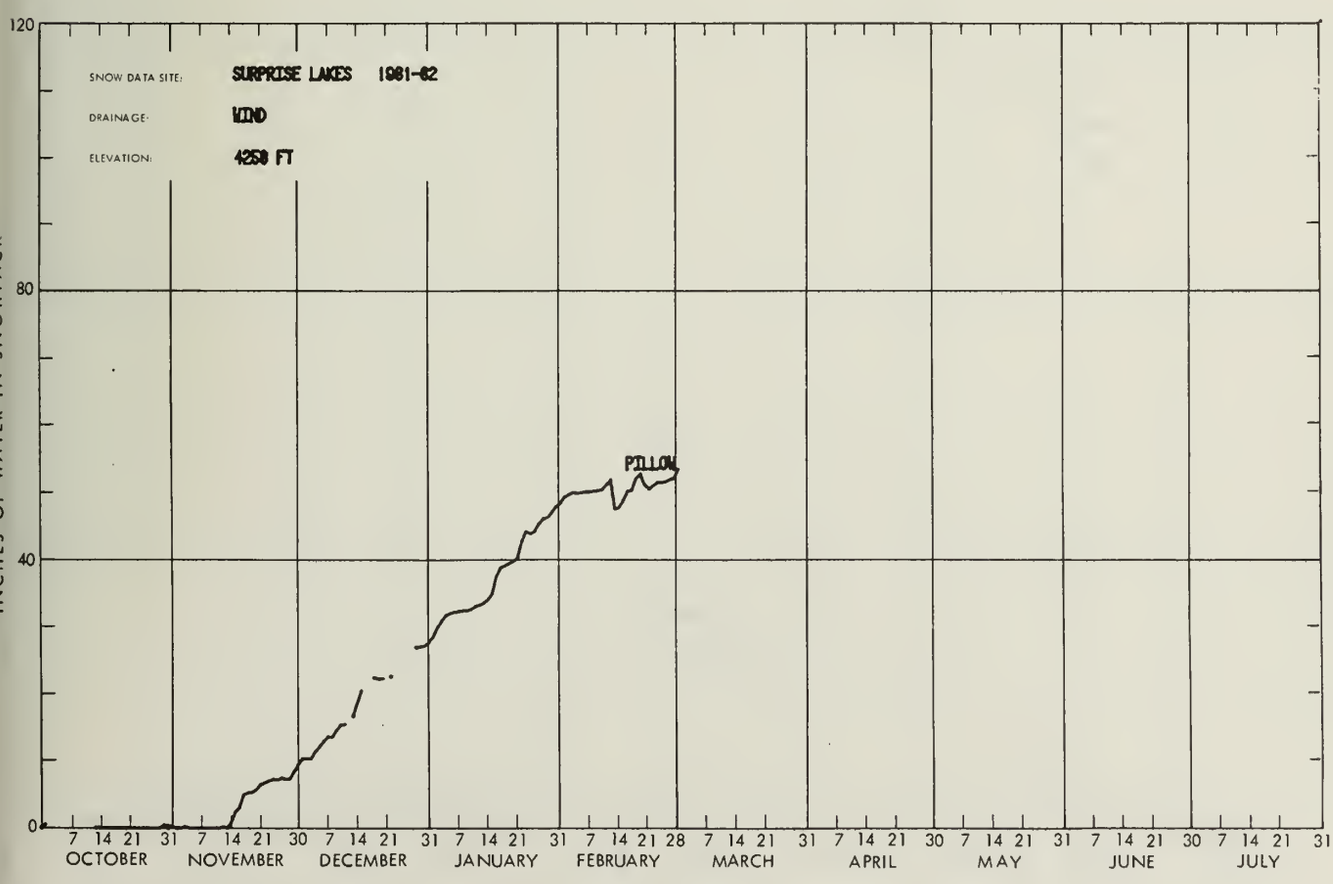

SNOW DATA SITE: POPE RIDGE 1981-82
DRAINAGE: ENTIAT
ELEVATION: 3540 FT
PILLOW
30
20
10
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: SALMON MEADOWS 1981-82
DRAINAGE: OKANOGAN
ELEVATION: 4500 FT
PILLOW
30
20
10
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: SHEEP CANYON 1960-61
DRAINAGE: COWLITZ
ELEVATION: 4650 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: STEVENS PASS 1961-62
DRAINAGE: WENATCHEE
ELEVATION: 4070 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
40
80
120
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: STRAWBERRY LANDING 1961-62
DRAINAGE: COWLITZ
ELEVATION: 3200 FT
PILLOW
120
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: SURPRISE LAKES 1961-62
DRAINAGE: WIND
ELEVATION: 4250 FT
PILLOW
120
80
40
0
INCHES OF WATER IN SNOWPACK
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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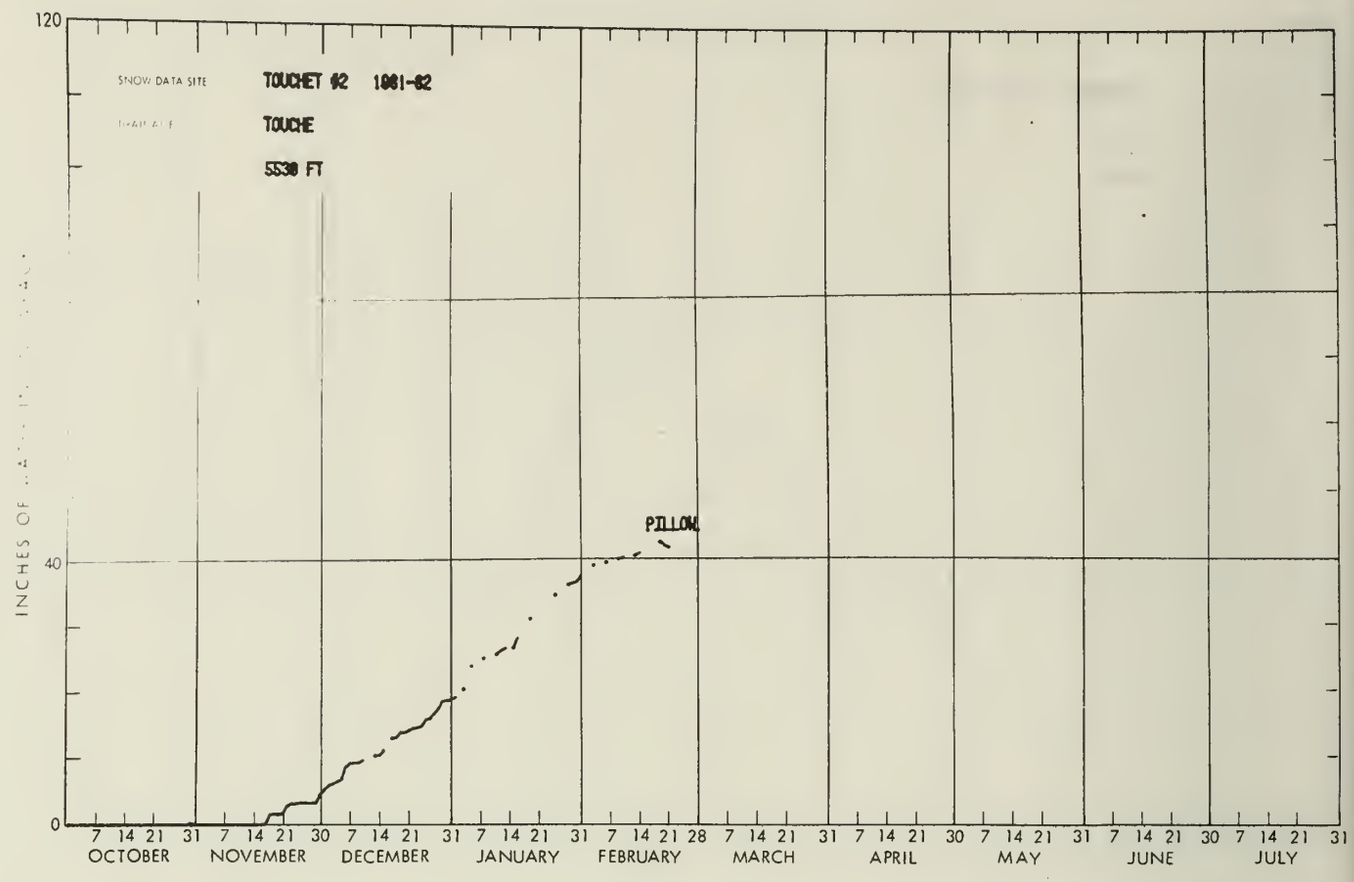
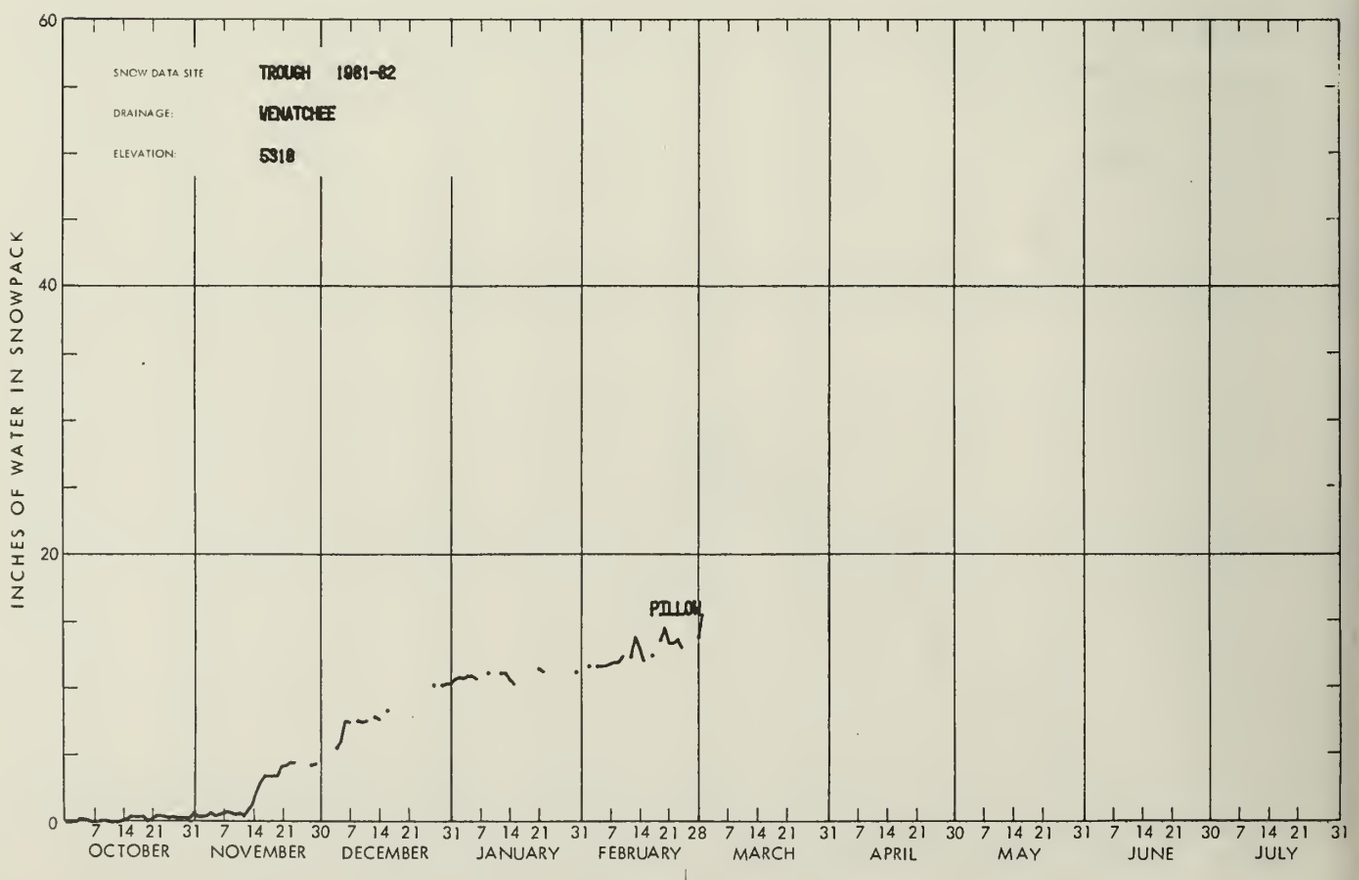
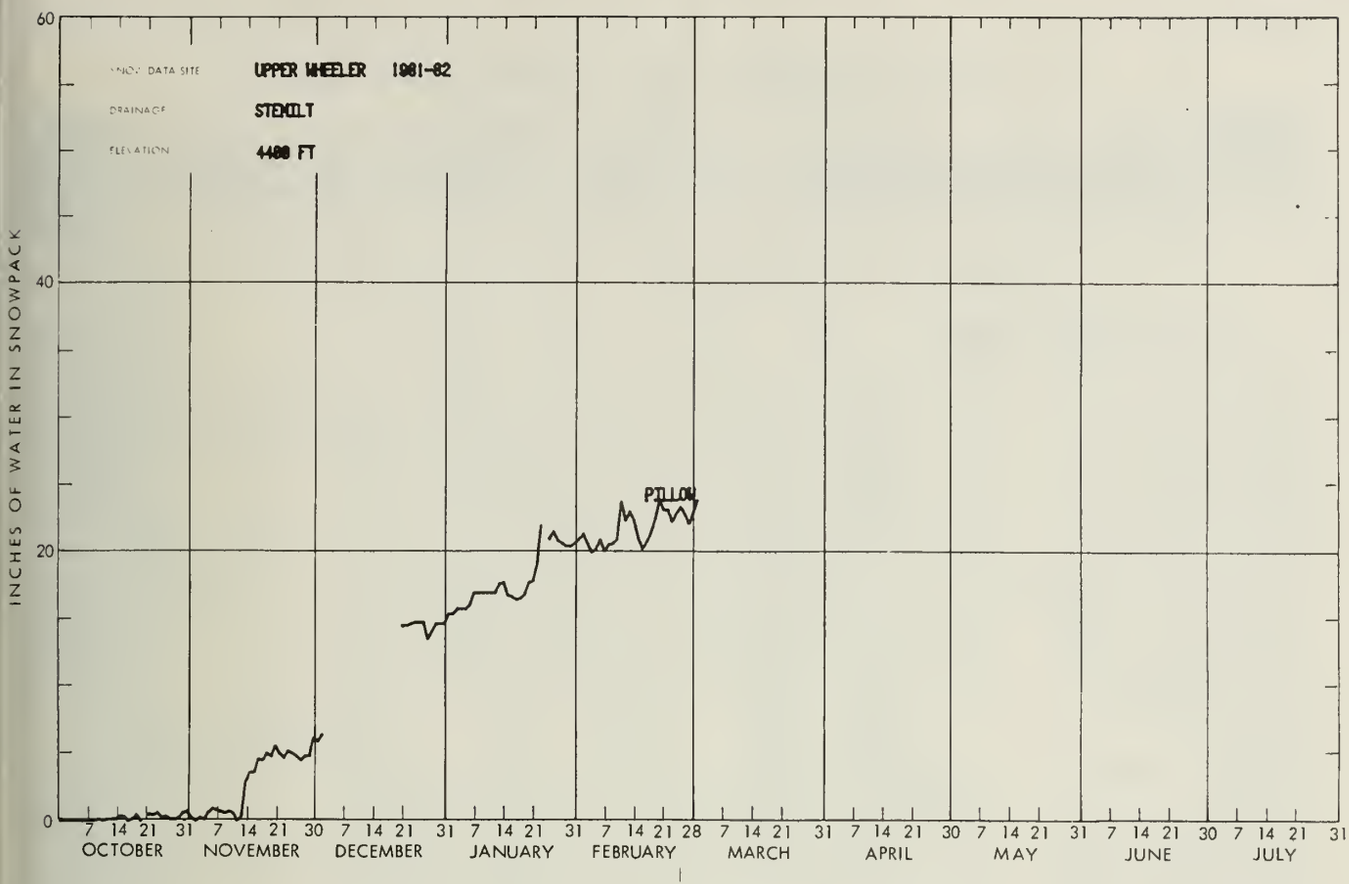
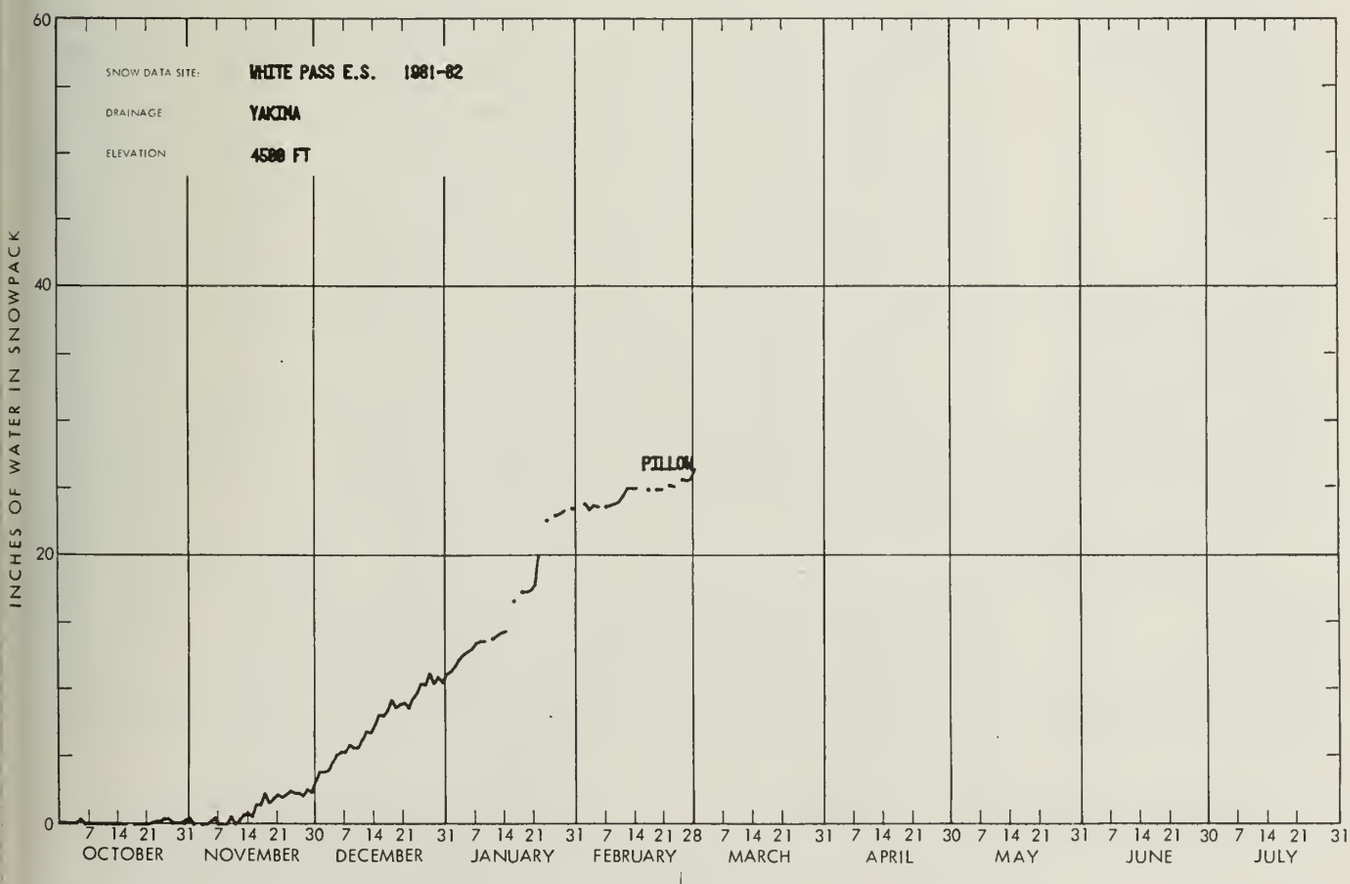

SNOW DATA SITE
TOUCHET #2 1981-82
TOUCHE
5530 FT
PILLOW
120
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
TROUGH 1981-82
DRAINAGE:
WENATCHEE
ELEVATION:
5318
INCHES OF WATER IN SNOWPACK
PILLOW
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
UPPER WHEELER 1981-82
DRAINAGE
STEKOLT
ELEVATION
4400 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE:
WHITE PASS E.S. 1981-82
DRAINAGE
YAKIMA
ELEVATION
4500 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

SNOW DATA TO MARCH 1, 1982 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Baree Creek	15B11	5500	2/25	114	45.4	26.0	43.8
Baree Midway	15B16	4600	2/25	90	34.1	14.8	34.0
Baree Trail	15B15	3800	2/25	25	8.6	0.5	10.0
Benton Meadow	16A02	2344	2/25	19	7.4	0.0	6.4
Benton Spring	16A03	4900	2/25	45	15.8	8.8	17.7
Boyer Mountain	17A02	5250	2/25	69	20.2	13.8	23.1
Brush Creek Timber	14A13	5000	2/25	33	10.0	4.5	9.5
Chewelah	17A04	4923	2/27	44	13.1	6.6	14.3
Heart Lake Trail	14C10	4800	2/25	58	20.8	7.6	21.1
Hoodoo Basin	15C10	6000	2/25	137	49.9	30.6	45.4
Hoodoo Creek	15C01	5900	2/25	130	47.5	25.8	42.0
Lookout	15B02	5250	2/25	85	30.6	16.6	31.0
Mosquito Ridge	16A04A	5100	2/25	106	38.3	23.3	34.6
Nelson	2D04-Can	3050	3/1	50	16.1	9.0	14.3*
Schweitzer Bowl	16A06	4500	3/2	78	31.2	-	28.1
Schweitzer Ridge	16A05	6100	3/2	118	44.6	29.2	40.3
Winchester Creek	17A03	2970	2/25	29	9.3	0.4	10.6
KETTLE RIVER							
Barnes Creek	2B06-Can	5300	2/26	61	19.1	13.5	17.3*
Big White Mtn.	2E03-Can	5500	3/2	61	18.1	13.6	17.0*
Boulder Road	18A02	1450	2/26	14	4.0	0.0	4.5
Butte Creek	18A03	4070	2/26	28	7.5	5.3	8.5
Cabin Creek	18A08	3170	2/26	24	7.1	5.8	7.2
Carmi	2E02-Can	4100	3/2	22	5.6	3.7	6.1*
Farron # 1	2B02-Can	4000	2/26	40	12.5	9.4	12.1*
Farron # 2	2B02A-Can	4000	2/26	41	12.8	9.8	11.4*
Goat Creek	18A04	3595	2/26	22	6.4	4.6	6.4
Graystoke Lake	2F04-Can	5950	3/1	48	12.0	5.8	14.1*
Monashee Pass	2E01-Can	4500	2/26	47	13.6	9.6	12.4*
Snow Caps Creek	18A05	2150	2/26	14	4.4	0.0	4.8
Snow Caps Trail	18A06	2720	2/26	21	5.9	3.6	5.8
Summit G.S.	18A07	4600	2/26	25	6.4	4.1	7.3
Trapping Creek Lower	2E05-Can	3050	3/2	20	5.0	1.7	5.1*
Trapping Creek Upper	2E04-Can	4450	3/2	35	10.2	6.3	9.1*
COLVILLE RIVER							
Baird	17A06	3215	2/26	22	6.5	0.0	6.7
Carlson	18A09	2885	2/27	Trace	0.0	0.0	4.2
Chewelah	17A04	4925	2/27	44	13.1	6.6	14.3
Stranger Mountain	17A05	4990	2/27	32	10.4	2.0	12.5
Togo	18A10	3370	2/27	26	9.2	0.6	10.3

\# Average based on 1963-77 average
* Average for years of record

1504 S.W. PORTLAND, OREGON 1973

SNOW DATA TO MARCH 1, 1982 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	6100	2/25	51	18.1	9.0	22.9
Copper Ridge	16B02	4800	2/24	62	25.2	7.6	25.1
Forty-nine Meadows	15B03	5000	2/26	72	23.8	11.9	27.2
Fourth of July Summit	16B03	3100	2/25	23	6.4	0.0	8.9
Kellogg Peak	16B05A	5560	2/25	72	27.3	8.9	28.2
Lookout	15B02	5250	2/25	85	30.6	16.6	31.0
Lost Lake	15B14A	6000	2/26	147	49.7	25.7	50.0
Lower Sands Creek	16B01	3400	2/24	45	15.2	4.1	17.5
Mosquito Ridge	16A04A	5110	2/25	106	38.3	23.3	34.6
Roland Summit	15B05A	5200	2/25	93	30.0	11.4	31.3
Sherwin	16C01	3200	2/26	40	14.2	2.6	13.3
Sunset	15B09A	5600	2/25	112	39.1	22.9	32.6
OKANOGAN RIVER							
Aberdeen Lake	1F01A-Can	4300	2/26	27	7.4	3.1	6.0*
Blackwall Mountain	2G03-Can	6250	2/25	91	32.0	23.1	30.7*
Bouleau Lake	2F21-Can	4580	2/27	55	14.6	8.8	12.0*
Brenda Mine	2F18-Can	4800	2/25	40	11.1	7.7	12.2*
Brookmere	1C01-Can	3200	2/28	33	9.2	6.6	8.8*
Enderby	1F04-Can	6250	2/26	124	45.7	25.7	31.8*
Esperon Creek Lower	2F15-Can	4400	2/27	41	11.5	7.4	10.4*
Esperon Creek Middle	2F14-Can	4700	2/27	47	13.9	9.1	13.0*
Esperon Creek Upper	2F13-Can	5490	2/27	54	16.1	10.7	15.6*
Grayback Res.	2F08-Can	5225	2/26	33	5.8	4.9	7.8*
Graystoke Lake	2F04-Can	5950	3/1	48	12.0	5.8	14.1*
Hamilton Hill	2G06-Can	4900	2/19	46	12.2	9.4	14.1*
Harts Pass	20A05A	6500	2/23	131	40.7	27.9	41.1
Horseshoe Basin +	19A05a	7000	2/27	56	16.8	13.4	16.3
Isintok Lake	2F11-Can	5510	2/27	26	7.1	2.6	7.4*
Lightning Lake	3D02-Can	4000	2/19	41	13.4	4.6	9.9*
Lost Horse Mountain	2G04-Can	6300	3/1	31	7.3	5.7	8.3*
Loup Loup	19A07	4650	2/24	35	9.8	7.8	8.8
McCulloch	2F03-Can	4200	2/28	27	7.0	4.3	6.3*
Missezula Mountain	2G05-Can	5100	2/19	34	8.7	4.3	8.8*
Mission Creek	2F05-Can	6000	3/1	61	18.9	10.9	17.0*
Monashee Pass	2E01-Can	4500	2/26	47	13.6	9.6	12.4*
Mount Kobau	2F12-Can	5950	2/27	42	12.1	8.5	10.6*
Muckamuck +	19A09a	6390	2/27	62	18.6	16.5	14.7
Mutton Creek No. 1	19A01	5700	2/24	50	15.2	9.7	12.7
Mutton Creek No. 2SP	19A11SP	6000	2/24	-	7.8	4.6	10.0
Oyama Lake	2F19-Can	4400	2/26	24	6.3	2.9	6.3*
Paysayten +	20A28a	4300	2/27	55	16.5	9.0	16.9
Postill Lake	2F07-Can	4500	2/26	29	8.0	5.3	7.4*
Rusty Creek	19A03	4000	2/24	25	6.1	6.2	6.6
Salmon Meadows	19A02	4500	2/24	38	9.6	9.6	9.1

\# Average based on 1963-77 average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO MARCH 1, 1982 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OKANOGAN RIVER (Cont.)							
Silver Star Mountain	2F10-Can	6050	2/27	90	28.7	16.8	23.8*
Starvation Mtn +	19A10a	6750	2/27	60	16.8	18.5	17.5
Summerland Reservoir	2F02-Can	4200	2/27	31	9.5	5.5	8.8*
Sunday Summit	2G01A-Can	4300	2/19	23	5.9	2.0	5.6*
Touts Coulee	19A06	2845	2/25	12	3.6	3.7	3.5
Trout Creek	2F01-Can	4700	3/1	23	6.8	2.2	6.5*
Vaseux Creek	2F20-Can	4600	3/1	27	6.0	3.9	6.0*
White Rocks Mountain	2F09-Can	6000	2/24	64	21.5	11.7	19.3*
METHOW RIVER							
Harts Pass	20A05A	6500	2/23	131	40.7	27.9	41.1
Horseshoe Basin +	19A05a	7000	3/27	56	16.8	13.4	16.3
Loup Loup	19A07	4650	2/24	35	9.8	7.1	8.8
Mutton Creek No. 1	19A01	5700	2/24	50	15.2	9.7	12.7
Mutton Creek No. 2 SP	19A11SP	6000	2/24	-	7.8	4.6	10.0
Rusty Creek	19A03	4000	2/24	25	6.1	6.2	6.6
Salmon Meadows	19A02	4500	2/24	38	9.6	9.6	9.1
War Creek Pass +	20A31a	6500	2/27	132	39.6	28.8	42.9
CHELAN LAKE BASIN							
Cloudy Pass +	20A22a	6500		Not Measured		31.2	35.0
Little Meadows +	20A24a	5275	2/27	136	53.4	23.4	37.6
Lyman Lake	20A23A	5900	2/27	162	63.7	39.6	49.8
Mirror Lake	20A39	5600	3/4	113	38.7	20.6	New
Park Creek Ridge	20A12A	4600	2/27	129	59.7	26.1	44.2
Rainy Pass	20A09	4780	2/25	111	39.6	23.0	37.0
War Creek Pass +	20A31a	6500	2/27	132	39.6	28.8	42.9
ENTIAT RIVER							
Blue Creek G.S.	20B28a	5425	2/26	132	43.6	24.4	33.8
Brief	20B19	1600	2/23	25	9.0	0.0	7.5
Entiat Meadows +	20A33a	4540	2/26	138	45.5	28.4	57.7
Entiat River Trail +	20A34a	3325	2/26	70	24.9	17.7	25.6
Four Mile Ridge +	20B27a	6800	2/26	96	21.7	21.5	28.4
Fox Camp +	20A36a	6510		Not Measured		42.3	52.9
Pope Ridge	20B20	3540	2/24	58	20.6	10.7	18.2
Pugh Ridge +	20A32a	6725	2/26	109	36.0	28.1	40.8
Shady Pass	20A37	6200	2/24	92	30.4	17.6	23.7
Snow Brushy +	20A35a	3910	2/26	117	41.5	23.5	35.8
Tommy Creek +	20B21a	4900	2/26	76	25.1	14.5	26.5

\# Average based on 1963-77 average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

SCS-PORTLAND OREGON 1978

SNOW DATA TO MARCH 1, 1982 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
WENATCHEE RIVER							
Berne-Mill Creek	21B23	2925	2/25	79	31.0	12.5	26.0
Berne-Mill Creek New SP	21B41	3240	2/25	69	27.8	6.9	24.0
Blewett Pass No. 2	20B02	4270	2/23	42	16.4	4.4	15.0
Chiwaukum G.S.	20B16	1810	2/25	35	12.6	5.7	11.6
Fish Lake	21B04	3371	2/25	97	40.4	12.6	31.1
Lake Wenatchee	20B05	1970	2/25	46	16.5	5.6	14.4
Leavenworth R.S.	20B17	1127	2/25	9.3	3.7	0.0	4.4
Lyman Lake	20A23A	5900	2/27	162	63.7	39.6	49.8
Merritt	20B18	2140	2/25	48	18.2	5.7	15.8
Stevens Pass	21B01	4070	2/25	121	49.0	16.5	48.0
Stevens Pass Sand Shed	21B45	3700	2/25	96	38.4	10.0	34.9
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	2/24	19	6.3	2.7	8.1
Scout-A-Vista	20B04	3400	2/24	23	8.2	4.8	8.2
STEMILT CREEK							
Jump-Off	20B08	4450	2/25	27	9.2	1.8	8.4
Stemilt Slide	20B06	5000	2/24	42	13.3	6.7	13.1
Upper Wheeler	20B07	4400	2/24	22	8.6	1.3	9.7
COLOCKUM CREEK							
Colockum Creek Upper	20B22	5300	2/25	33	11.7	3.6	13.3
Colockum Creek Lower	20B23	4300	2/25	24	8.5	3.5	10.1
Trough # 2	20B25SP	5310	2/25	38	14.0	6.0	New
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	2/22	16	6.9	3.1	6.7
Big Boulder Creek	21B09	3200	2/25	63	25.1	4.8	19.3
Blewett Pass No. 2	20B02	4270	2/23	42	16.4	4.4	15.0
Bumping Lake	21C08	3450	2/12	48	8.8	4.3	14.8
			2/26	37	12.5	3.3	20.4
Bumping Lake New	21C36	3400	2/12	60	16.5	6.1	18.5
			2/26	48	17.8	6.5	20.2
Cayuse Pass	21C06	5300	3/5	203	86.9	28.5	71.0
Colockum Pass	20B09	5370	2/23	45	15.9	6.6	14.2
Cooke Creek	20B10	4123	2/23	13	4.5	0.0	5.7
Corral Pass	21B13	6000		Not Measured		16.6	35.1
Fish Lake	21B04	3371	2/25	97	40.4	12.6	31.1
Green Lake	21C10	6000	2/22	95	31.3	17.5	29.6
Grouse Camp	20B11	5385	2/24	49	18.9	8.6	15.5
High Creek	20B12	2930	2/24	17	6.1	2.5	6.1
Joe Lake	21B46a	4624	2/26	177	76.1	25.9	53.5

Average based on 1963-77 average

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO MARCH 1, 1982 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
YAKIMA RIVER (Cont.)							
Lake Cle Elum	21B14M	2200	2/10	29	11.6	2.0	10.5
			2/24	32	12.7	2.9	9.2
Lemah Creek +	21B47a	3327	2/26	120	51.6	15.9	41.9
Manashtash	20C01	3935	2/25	12	4.3	0.0	4.3
Morse Lake	21C17	5400	2/25	133	57.7	27.8	47.2
Nanum	20B13	3875	2/24	19	5.6	2.5	9.8
Olallie Meadows	21B02	3625	2/26	94	44.1	6.7	44.8
Satus Pass	20D01	4030	2/24	20	7.4	0.0	9.1
Stampede Pass SP	21B10	3860	2/16	108	48.1	8.9	36.2
			2/22	105	51.4	11.0	35.7
Trail Creek	20B14	3360	2/23	Trace	0.0	0.0	2.6
Tunnel Avenue	21B08	2450	2/9	57	20.5	3.0	21.4
			2/24	65	24.9	5.7	21.6
Van Epps Pass +	20B26a	5925		Not Measured		27.3	43.0
Walters Flat	20B15	3360	2/24	17	6.6	4.3	7.1
Waptus Lake +	21B49a	3024	2/26	117	50.3	15.9	41.4
White Pass (E. Side)	21C28	4500	2/11	76	24.2	3.5	21.0
			2/25	68	25.7	5.7	23.1
AHTANUM CREEK							
Ahtanum R.S.	21C11	3100	2/22	16	6.9	3.1	6.7
Green Lake	21C10	6000	2/22	95	31.3	17.5	29.6
LOWER COLUMBIA DRAINAGE							
ASOTIN CREEK							
Spruce Springs	17C04	5700	2/22	63	22.9	11.4	22.6
MILL CREEK							
Homestead	17C01	4030	2/24	30	10.6	0.0	8.2
Martin Springs	17C02	4400	2/24	41	15.2	0.0	12.1
High Ridge	18D19	4150	3/1	87	36.1	13.1	29.4
KLICKITAT RIVER							
Satus Pass	20D01	4030	2/24	20	7.4	0.0	9.1
LEWIS RIVER							
June Lake	22C05	3200	3/1	SNOTEL	25.5	-	New
Lone Pine Shelter	21C26	3800	3/1	SNOTEL	45.0	-	36.2
Surprise Lakes	21C13A	4250	3/1	SNOTEL	53.5	-	44.2

Average based on 1963-77 average
\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO MARCH 1, 1982 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
COWLITZ RIVER							
Cayuse Pass	21C06	5300	3/5	203	86.9	28.5	71.0
White Pass (E.Side)	21C28	4500	2/11	76	24.2	3.5	21.0
			2/25	68	25.7	5.7	23.1
Potato Hill	21C14	4500		SNOTEL	-	5.8	31.3
Strawberry Landing	22C08SP	3280	2/28	SNOTEL	57.3	6.6	New
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	3/5	203	86.9	28.5	71.0
Corral Pass	21B13	6000		Not Measured		16.6	35.1
Morse Lake	21C17	5400	2/25	133	57.7	27.8	47.2
GREEN RIVER							
Airstrip	21B24	1800	2/26	4	2.0	0.0	5.1
Charley Creek	21B25	1200	2/26	0	0.0	0.0	1.2
Cougar Mountain SP	21B42SP	3200	2/26	54	22.8	0.0	20.9
Grass Mtn. No. 2	21B27	2900	2/26	29	11.2	0.3	19.1
Grass Mtn. No. 3	21B28	2100	2/26	9.2	3.2	0.0	5.7
Lester Creek	21B29	3100	2/26	55	19.6	4.9	21.7
Lynn Lake	21B50	4000	2/26	50	22.7	3.6	18.7
Sawmill Ridge	21B31	4700	2/26	83	32.8	10.4	33.7
Snowshoe Butte SP	21B43SP	5000	2/26	132	54.8	14.1	52.7
Stampede Pass SP	21B10	3860	2/16	108	48.1	8.9	36.2
			2/22	105	51.4	11.0	35.7
Twin Camp	21B30	4100	2/26	73	28.8	3.8	22.3
CEDAR RIVER							
City Cabin	21B03	2390	2/26	34	14.1	0.0	17.2
Mt. Gardner	21B21	3300	2/24	46	20.1	0.0	18.7
SNOQUALMIE RIVER							
Alpine Meadow	21B48	3500	2/25	109	48.3	4.4	41.2
Lake Elizabeth	21B19	2900		Not Measured		1.7	37.7
Olallie Meadows	21B02	3625	2/26	94	44.1	6.7	44.8
S. F. Tolt	21B18	1900		Not Measured		0.0	3.2
SKYKOMISH RIVER							
Lake Elizabeth	21B19	2900		Not Measured		1.7	37.7
Stevens Pass	21B01	4070	2/25	121	49.0	16.5	48.0
Stevens Pass Sand Shed	21B45	3700	2/25	96	38.4	10.0	34.9

Average based on 1963-77 average

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO MARCH 1, 1982 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	2/25	50	16.7	0.0	14.9
Beaver Pass	21A01	3680	2/24	93	33.4	6.2	28.7
Brown Top Ridge +	21A28a	6000	2/23	172	58.2	38.0	61.2
Cloudy Pass +	20A22a	6500		Not Measured		26.7	35.0
Devils Park	20A04	5900	2/23	130	41.8	28.1	41.3
Freezeout Creek Trail	20A01	3500	2/24	45	14.2	1.6	12.7
Freezeout Meadows New	20A38	5000	2/24	83	28.4	16.4	42.5
Granite Creek	20A06	3500	2/25	57	18.8	7.5	19.2
Harts Pass	20A05A	6500	2/23	131	40.7	27.9	41.1
Klesilkwa	3D03A-Can	3700		Late Report		0.0	12.0*
Lyman Lake	20A23A	5900	2/27	186	75.0	35.4	49.8
Meadow Cabins	20A08	1900	2/24	24	8.1	0.0	7.4
New Hozomeen Lake	21A30	2800	2/24	36	11.3	0.0	14.2
New Tashme	3D01A-Can	2500	2/28	33	11.8	0.0	10.8*
Lightning Lake	3D02-Can	4000	2/19	41	13.4	4.6	9.9*
Rainy Pass	20A09	4780	2/25	111	39.6	23.0	37.0
Thunder Basin	20A07	4200	2/24	61	22.2	4.9	20.9
BAKER RIVER							
Dock Butte	21A11A		2/28	174	70.0	15.0	64.2
Easy Pass	21A07A	5200	2/28	198	79.0	37.0	71.3
Jasper Pass	21A06A	5400	2/28	244	98.0	43.0	82.5
Marten Lake	21A09A	3600	2/28	200	80.0	21.0	71.8
Mount Blum +	21A18a	5800	2/28	186	74.0	33.0	62.1
Panorama New	21A26	4300		Not Measured		17.3	66.0
Rocky Creek	21A12A	2100	2/28	100	40.0	0.0	30.4
Schreibers Meadow	21A10A	3400	2/28	170	68.0	3.0	54.5
S. F. Thunder Creek	21A14A	2200	2/28	56	14.0	0.0	11.7
Watson Lakes	21A08A	4500	2/28	160	64.0	21.0	60.9
NOOKSACK RIVER							
Bald Mountain +	21A19a	4400		Not Measured		11.0	46.2
Canyon +	21A20a	5100		Not Measured		49.4	58.1
Glacier Creek	21A23	3700		Not Measured		-	15.1
Panorama New	21A26	4300		Not Measured		17.3	66.0
Twin Lakes +	21A21a	5200		Not Measured		32.8	70.4
OLYMPIC PENINSULA							
DUNGENESS RIVER							
Deer Park	23B04	5200	3/2	64	23.1	4.7	18.3
MORSE CREEK							
Cox Valley	23B14	4500	2/28	114	41.8	8.6	36.5
ELWHA RIVER							
Hurricane	23B03	4500	2/24	63	20.3	1.9	20.3

\+ Snow water equivalent estimated from aerial stadia observation
\# Average based on 1963-77 average
* Average for years of record

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U. S. Department of Agriculture
  Forest Service
U. S. Department of Commerce
  NOAA, National Weather Service
U. S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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Water Supply Outlook For Washington

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Cooperating with

EPARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
April 1, 1982

USDA SCS PORTLAND OR 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climotic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and morked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported os snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water ond other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and locol reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from Jonuary 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

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WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

NORMAN A. BERG
ADMINISTRATOR
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WASHINGTON D C

Released by

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

DONALD W. MOOS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor
JAMES K. MARRON, Assistant Snow Survey Supervisor
DONALD R. EASTLUND, Hydrologic Technician
NORINE P. KENT, Statistical Assistant

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
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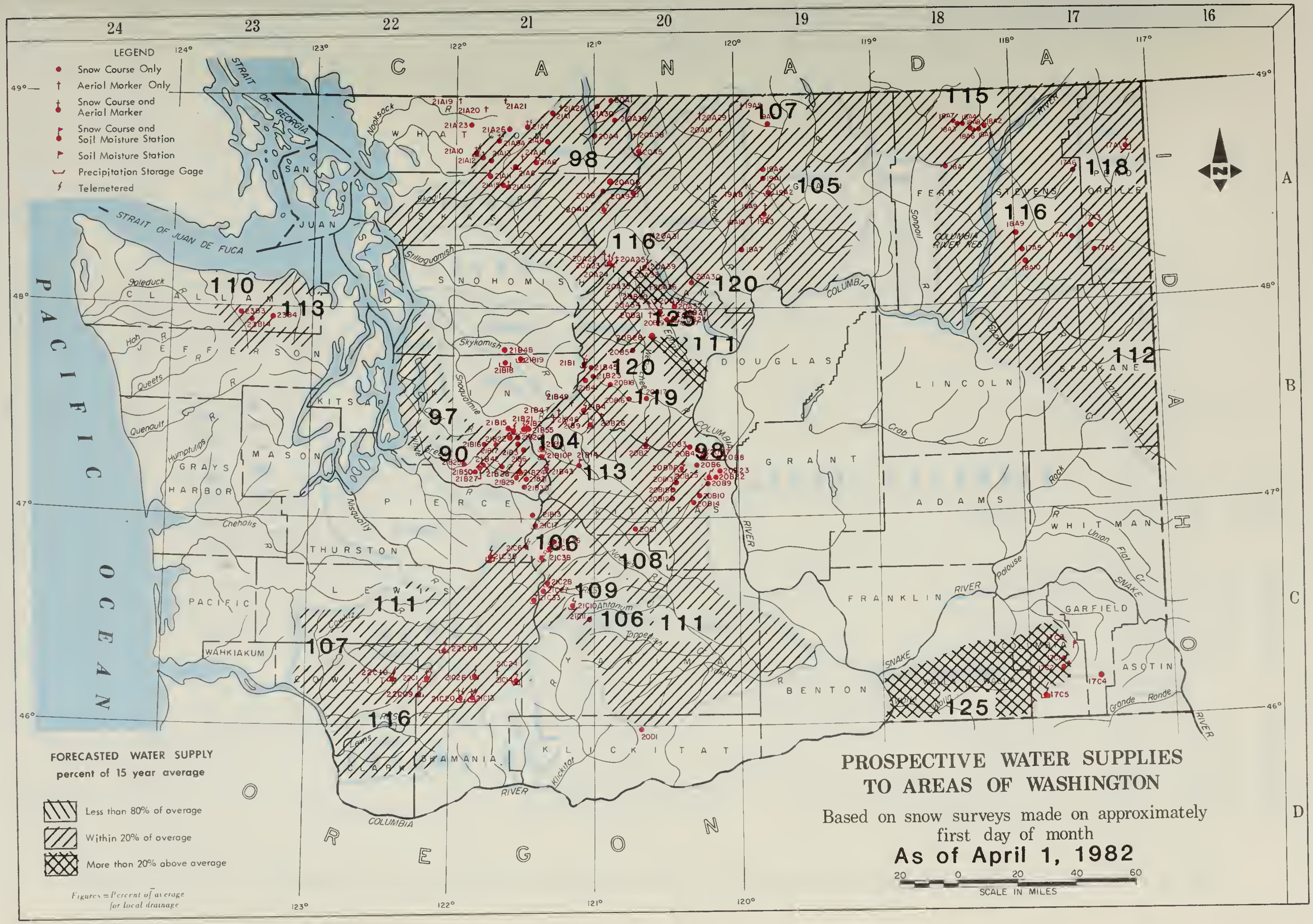
PROSPECTIVE WATER SUPPLIES
TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
As of April 1, 1982
SCALE IN MILES
LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
CANADA
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OREGON
PACIFIC OCEAN
STRAIT OF GEORGIA
STRAIT OF JUAN DE FUCA
SAN JUAN
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115
107
105
118
116
98
116
120
110
113
125
111
112
120
119
97
104
90
98
113
106
108
109
111
106
111
107
116
125

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970
Kettle River					
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Colville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370
Sanpoil River					
Sherman Creek Pass	18A1	19	36N	35E	5350
Okanogan River					
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2SP	33	37N	24E	4500
Starvation Mtn.	19A10a	15	35N	23E	6750
Touts Coulee	19A6	30	39N	25E	2845
Methow River					
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Horseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650
Chelan Lake Basin					
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbor	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirror Lake	20A39	30	31N	18E	5600
Entiat River					
Blue Creek G.S.	20B28a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2 SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Trough #2	20B25SP	10	20N	20E	5310

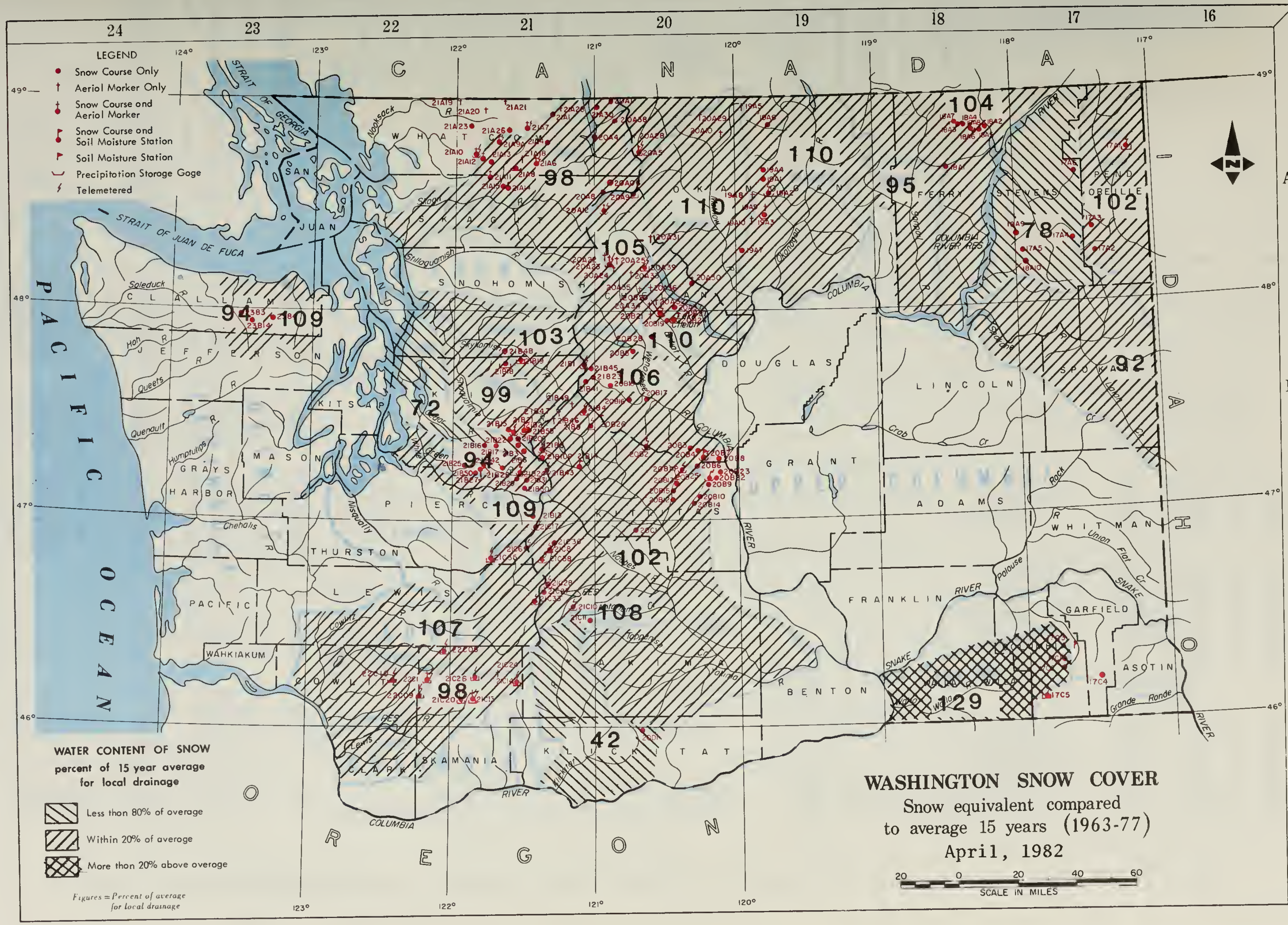
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Colockum Creek					
Colockum Creek Upper	20B22	1	20N	20E	5300
Colockum Creek Lower	20B23	1	20N	20E	4300
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400
Stemilt Creek					
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21B47a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Morse Lake	21C17SP	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20B26a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Couse	17C3m	2	9N	40E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Touchet No. 2	17C5SP	6	7N	40E	5530
Klickitat River					
Satus Pass	20D1	21	6N	17E	4030

NAME	NUMBER	SEC.	TWP	RANGE	ELEV.
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lone Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35 SP	13	15N	8E	5500
White River					
Corral Pass	21B13 SP	30	18N	11E	6000
Green River					
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B43SP	14	20N	11E	5000
Stampede Pass	21B10 SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washington	21B15P	8	22N	9E	3000
Rex River	21B17P	11	21N	9E	2400
South Fork Cedar	21B6P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400
Snoqualmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
South Fork Tolt	21818P	26	26N	9E	1900
Olallie Meadows East	21855SP	20	22N	11E	8700
Skykomish River					
Lake Elizabeth	21B19P	33	26N	10E	2900

NAME	NUMBER	SEC.	TWP	RANGE	ELEV.
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadows Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
Nooksack River					
Bald Mountain	21A19a	7	40N	7E	4400
Canyon	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panorama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Morse Creek					
Cox Valley	23B14	31	29N	6W	4500
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow


WASHINGTON SNOW COVER
Snow equivalent compared
to average 15 years (1963-77)
April, 1982
LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
WATER CONTENT OF SNOW
percent of 15 year average
for local drainage
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
SCALE IN MILES
20 0 20 40 60
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
SAN JUAN
WHATCOM
OKANOGAN
FERRY
STEVENS
PEND OREILLE
SKAGIT
SNOHOMISH
CHELAN
DOUGLAS
LINCOLN
SPOKANE
CLALLAM
JEFFERSON
KITSAP
MASON
GRAYS HARBOR
KING
PIERCE
THURSTON
KITTITAS
GRANT
ADAMS
WHITMAN
PACIFIC
LEWIS
YAKIMA
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
BENTON
WAHKIAKUM
COWLITZ
SKAMANIA
KLICKITAT
CLARK
COLUMBIA RIVER
SNAKE RIVER
104
110
95
78
102
98
110
105
92
94
109
103
110
106
99
72
94
109
102
108
107
98
129
42
24 23 22 21 20 19 18 17 16
A B C D
124° 123° 122° 121° 120° 119° 118° 117°
49° 48° 47° 46°

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Pend Oreille River					
Bayer Mauntain	17A2	7	31N	43E	5250
Bunchgrass Meadaw	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970
Kettle River					
Baulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snaw Caps Creek	18A5	3	38N	36E	2150
Snaw Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Calville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mauntain	17A5	26	31N	38E	4990
Taga	18A10	6	29N	38E	3370
Sanpoil River					
Sherman Creek Pass	18A1	19	36N	35E	5350
Okanogan River					
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Muttan Creek Na. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salman Meadaws	19A2SP	33	37N	24E	4500
Starvatian Mtn.	19A10a	15	35N	23E	6750
Tauts Caulee	19A6	30	39N	25E	2845
Methow River					
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Harseshoe Basin	19A5a	15	40N	23E	7000
Laup Laup	19A7	36	34N	23E	4650
Chelan Lake Basin					
Claudy Pass	20A22a	12	31N	15E	6500
Greenwaod Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbar	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirrar Lake	20A39	30	31N	18E	5600
Entiat River					
Blue Creek G.S.	20B28a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadaws	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Faur Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20B20	22	29N	18E	3540
Pape Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tammy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2 SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Traugh #2	20B25SP	10	20N	20E	5310
Colackum Creek					
Colockum Creek Upper	20B22	11	20N	20E	5300
Colockum Creek Lower	20B23	1	20N	20E	4300
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400
Stemilt Creek					
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grause Camp	20B11SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21B47a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Morse Lake	21C17SP	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20B26a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Couse	17C3m	2	9N	40E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Tauchet No. 2	17C5SP	6	7N	40E	5530
Klickitat River					
Satus Pass	20D1	21	6N	17E	4030
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cawlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Patata Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Nisqually River					
Paradise Park (New)	21C35 SP	13	15N	8E	5500
White River					
Carral Pass	21B13 SP	30	18N	11E	6000
Green River					
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Caugar Mauntain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B43SP	14	20N	11E	5000
Stampede Pass	21B10 SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washingtan	21B15P	8	22N	9E	3000
Rex River	21B17P	11	21N	9E	2400
Sauth Fark Cedar	21B6P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400
Snaqualmie River					
Alpine Meadaw	21B48	31	27N	9E	3500
Olallie Meadaws	21B2P	19	22N	11E	3625
South Fork Tolt	21B18P	26	26N	9E	1900
Olallie Meadaws East	21B55SP	20	22N	11E	8700
Skykamish River					
Lake Elizabeth	21B19P	33	26N	10E	2900
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brawn Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadaws (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadaws Cabins	20A8	29	36N	14E	1900
New Hazameen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
Naak'sack River					
Bald Mauntain	21A19a	7	40N	7E	4400
Canyon	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panarama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Morse Creek					
Cox Valley	23B14	31	29N	6W	4500
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

April 1, 1982

Many of the snow survey measurements that were taken for the April 1 snow report were made before the heavy, intense storms that occurred at the end of March. Enough were made following the most intense storms to give an indication of their effect to the total water supply picture. In spite of the local intensity, the long range impact on water supply conditions is minimal; one or two percentage points at the most, depending upon the size of the watershed and the major source of the water, i.e., high elevation or low elevation. The end result is the fact that the water supply outlook for the State of Washington remains good. The snowpack improved in some watersheds from that which was measured last month and deteriorated in others. Runoff during the past month was all above normal except for the Similkameen. Rainfall was above normal except on the Cascades where both east and west sides were reported to have sub-normal amounts. As stated last month, there are no foreseeable problem areas.

SNOW COVER

The comparison of snow cover shows that only the Colville and Spokane drainages have less than normal amounts of snow cover as of April 1 -- 22 and 8 percent below average, respectively. This is in the Upper Columbia Basin tributary to Washington. Along the Lower Columbia drainages in Washington, the variation is much greater. The three courses in the Blue Mountains indicate the snowpack in that area to be 29 percent above average; but the one snow course in the Klickitat drainage, near Satus Pass, has only a 42 percent of normal amount of snow. In the Lewis and Cowlitz watersheds, the snow cover is 98 and 107 percent of normal, respectively. Along the west slopes of the Cascades draining into Puget Sound, the average snowpack is slightly less than normal with the Cedar having only 72 percent and the White 109 percent for minimum and maximum areas. In the Olympic Peninsula drainages flowing north, the average snowpack is 3 percent above average.

RESERVOIRS

The above normal runoff of the past month has added to the improved reservoir picture. Of the five irrigation reservoirs in the Yakima basin, only Bumping Lake and Cle Elum have below normal amounts of water in storage. Water is being passed through Bumping because it will readily fill at a later date and Cle Elum is still down due to the fish water releases that were court ordered. All reservoirs will fill with the spring runoff. The possible exception will be Lake Cle Elum. The power reservoirs are all being managed for flood control with scheduled spills and subsequent filling later in the runoff period.

PRECIPITATION

Rainfall across the state and on tributary basins was not as good during March as it was during the previous months, as reported by the National Weather Service. Subnormal amounts occurred on the East Slope Cascades, Northwest Slope Cascades, and Southwest Slope Cascades drainage divisions. For the winter period of November through March, all drainage divisons are still reported to have above normal amounts of rainfall, ranging from 7 percent above for the Northwest Slope Cascades to 24 percent above for the Southeastern Washington drainage division. In March, the most rainfall, percentagewise, fell on the Okanogan drainage division -- 92 percent above normal.

STREAMFLOW

Just like last month, as reported by the Current Records Center of the U. S. Geological Survey, the only stream that had a below normal outflow during the month was the Similkameen River as measured at Nighthawk. This was 26 percent below -- also the same as last month. There were no great amounts this past month, just consistantly above normal outflows. The mainstem continues to have excellent outflows with The Dalles reported to have 43 percet above normal flow. Forecasts of spring and summer runoff are all for near normal or above normal amounts. The only below average flows are forecast to be from the Skagit, Green, and Cedar River watersheds and they are less than 10 percent below normal. The best flows are forecast to occur from the Blue Mountains in southeastern Washington. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - April - 1982

The following summarized runoff forecasts are based principally on mountain snowcover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. The forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1981 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet % 15-Yr. Avg.	Forecast period	1981	1980	1979	15-Yr. Average 63-77
COLUMBIA BASIN							
COLUMBIA RIVER SYSTEM							
Columbia River	49100	108	Apr-Sept	48531	40816	34484	45510
at Birchbank 1/	39200	108	Apr-July	38501	34085	27181	36358
	28300	108	Apr-June	27002	27623	19661	26197
Columbia River	76100	112	Apr-Sept	70303	61016	52769	68026
at Grand Coulee 1/	63600	111	Apr-July	58525	52320	44096	57050
	49200	111	Apr-June	44235	43871	35138	44280
Columbia River	84100	114	Apr-Sept	77308	66512	55298	73911
bl. Priest Rapids 1/	70900	114	Apr-July	64689	57767	46700	62444
	55300	114	Apr-June	49348	48667	37453	48479
Columbia River	120000	116	Apr-Sept	96997	93170	76843	103477
at The Dalles, OR 1/	102000	115	Apr-July	82171	79931	65758	88503
	81900	115	Apr-June	65104	68316	55016	71219
PEND OREILLE RIVER SYSTEM							
Pend Oreille River	18500	118	Apr-Sept	13896	13271	11639	15643
bl. Box Canyon	16900	118	Apr-July	13179	12116	11095	14334
	14500	118	Apr-June	11594	10776	10217	12277
KETTLE RIVER SYSTEM							
Kettle River	2120	115	Apr-Sept	2181	1835	1259	1845
nr. Laurier	1980	113	Apr-July	2039	1747	1216	1753
	1780	112	Apr-June	1711	1603	1132	1587
Colville River	155	116	Apr-Sept		116	63	134
at Kettle Falls	140	114	Apr-July		105	58	123
	130	113	Apr-June		97	55	115

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore-cast period	Seasonal Streamflow in Thousands of Acre-Fee 1981	1980	1970	15-Y Avera 63-7
SPOKANE RIVER SYSTEM **							
Spokane River	3270	112	Apr-Sept	2238	2214	2809	29
at Post Falls, ID 2/	3060	112	Apr-July	2145	2046	2757	27
	2910	112	Apr-June	1960	1904	2678	26
OKANOGAN RIVER SYSTEM							
Similkameen River	1620	107	Apr-Sept	1241	1479	872	15
nr.Nighthawk	1495	106	Apr-July	1118	1391	812	14
	1300	109	Apr-June	930	1247	728	11
Okanogan River	1800	105	Apr-Sept		1551	909	17
nr. Tonasket	1660	106	Apr-July	1363	1423	825	15
	1395	117	Apr-June	1090	1240	730	13
METHOW RIVER SYSTEM							
Methow River	1210	120	Apr-Sept		996	478	10
nr. Pateros	1130	120	Apr-July		934	432	9
	950	120	Apr-June		811	382	7
CHELAN RIVER SYSTEM							
Chelan River	1370	111	Apr-Sept	917	1120	753	12
at Chelan 3/	1210	112	Apr-July	812	1020	662	10
	935	112	Apr-June	647	859	553	8
Stehekin River	1020	116	Apr-Sept			566	8
at Stehekin	860	116	Apr-July			477	7
	650	117	Apr-June			387	5
Entiat River	300	125	Apr-Sept		216	134	2
nr. Ardenvoir	270	124	Apr-July		200	120	2
	210	121	Apr-June		172	104	1
WENATCHEE RIVER SYSTEM							
Wenatchee River	1560	120	Apr-Sept			893	12
at Plain	1400	121	Apr-July			812	11
	1060	117	Apr-June			704	9
Wenatchee River	2110	119	Apr-Sept	1249	1516	1165	17
at Peshastin	1850	117	Apr-July	1148	1399	1074	15
	1490	119	Apr-June	956	1208	938	12
Stemilt Basin	135*		May-Sept				1
nr. Wenatchee							
Icicle Creek	395	106	Apr-Sept				3
nr. Leavenworth	360	105	Apr-July				3
	295	106	Apr-June				2

* Thousands of Miners' Inches.

** Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane valley farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
YAKIMA RIVER SYSTEM							
Yakima River	150	104	Apr-Sept	95	115	124	144
nr. martin 4/	140	105	Apr-July	82	103	114	133
	120	105	Apr-June	73	95	101	114
Yakima River	1100	113	Apr-Sept	700	792	714	975
at Cle Elum 5/	980	111	Apr-July	643	716	683	882
	820	109	Apr-June	563	646	599	750
Yakima River	2400	111	Apr-Sept	1194	1833	1388	2168
nr. Parker 6/	2170	111	Apr-July	1059	1733	1287	1954
	1860	110	Apr-June	961	1610	1179	1693
Kachess River	140	111	Apr-Sept	81	111	101	126
nr. Easton 7/	135	113	Apr-July	72	105	95	119
	115	112	Apr-June	66	91	88	103
Cle Elum River	535	112	Apr-Sept	313		348	479
nr. Roslyn 8/	490	113	Apr-July	282	350	326	435
	400	112	Apr-June	244	314	292	358
Bumping River	155	106	Apr-Sept	78	129	99	146
nr. Nile 9/	140	106	Apr-July	70	120	92	132
	110	104	Apr-June	63	111	82	106
American River	135	106	Apr-Sept			81	127
nr. Nile	120	103	Apr-July			74	116
	100	105	Apr-June			66	95
Tieton River	275	109	Apr-Sept	148	224	179	252
at Tieton Dam 10/	230	108	Apr-July	131	192	148	212
	180	107	Apr-June	108	166	120	168
Naches River	965	108	Apr-Sept	419	729	574	893
nr. Naches 11/	860	107	Apr-July	380	694	528	806
	720	106	Apr-June	339	638	478	678
Ahtanum Creek	50	106	Apr-Sept				47
nr. Tampico 12/	45	107	Apr-July				42
	40	108	Apr-June				37

4/ Observed flow corrected for storage in Lake Keechelus.
5/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.
6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.
7/ Observed flow corrected for storage in Lake Kachess.
8/ Observed flow corrected for storage in Lake Cle Elum.
9/ Observed flow corrected for storage in Bumping Lake.
10/ Observed flow corrected for storage in Rimrock Lake.
11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.
12/ Observed flow of North and South Forks (Combined).

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Forecast Period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr. Average 63-77
LOWER COLUMBIA RIVER SYSTEM							
Mill Creek	21.9	125	Apr-Sept			22.37	17.50
at Walla Walla	21.7	125	Apr-July			22.25	17.33
	21.4	125	Apr-June			22.14	17.15
Lewis River	1500	116	Apr-Sept	1096	1001	962	1298
at Ariel 13/	1300	115	Apr-July	971	883	830	1128
	1150	116	Apr-June	865	798	749	992
Cowlitz River	2350	111	Apr-Sept		1626	1563	2126
bl. Mayfield Dam	2040	110	Apr-July		1432	1367	1854
	1710	110	Apr-June		1275	1203	1553
Cowlitz River	2950	107	Apr-Sept	2390	1976	2046	2766
at Castle Rock 14/	2550	106	Apr-July	2125	1852	1792	2401
	2150	106	Apr-June	1875	1649	1574	2029
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
Dungeness River	180	113	Apr-Sept			110	160
nr. Sequim	145	112	Apr-July			90	130
	105	109	Apr-June			71	96
ELWHA RIVER SYSTEM							
Elwha River	610	110	Apr-Sept			404	553
nr. Port Angeles	500	110	Apr-July			330	454
PUGET SOUND							
SKAGIT RIVER SYSTEM							
Skagit River	2190	99	Apr-Aug			1785	2212
at Newhalem 15/	2310	98	Apr-Sept			1648	2356
	1920	97	Apr-July			1358	1972
	1440	97	Apr-June			1102	1485
GREEN RIVER SYSTEM							
Green River							
bl. Howard Hanson Dam 16/	285	90	Apr-Sept				316
	255	90	Apr-July				284
	230	90	Apr-June				256
CEDAR RIVER SYSTEM							
Cedar River	90	97	Apr-Sept				93
nr. Cedar Falls							

13/ Observed flow corrected for storage in Lake Merwin, Yale, and Swift Reservoirs.
14/ Observed flow corrected for storage in Mayfield Reservoir.
15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.
16/ Observed flow corrected for storage in Howard Hanson Dam.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured April 1 1982	1981	1980	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	166.7	170.4	87.1	121.6
Columbia	Franklin D. Roosevelt Lake	5232.0	1094.0	4224.7	1374.8	1260.0
Columbia	Banks Lake	714.9	682.9	685.5	688.2	590.8
Okanogan	Conconully Reservoir	13.0	10.7	8.6	4.0	7.2
Okanogan	Conconully Lake	10.5	9.1	10.4	8.3	7.5
Chelan	Lake Chelan	676.1	208.3	408.9	92.0	184.6
		YAKIMA				
Yakima	Keechelus Lake	157.8	142.5	156.9	94.4	108.8
Kachess	Kachess Lake	239.0	203.6	217.2	92.2	189.8
Cle Elum	Lake Cle Elum	436.9	148.5	304.2	363.4	292.1
Bumping	Bumping Lake	33.7	5.9	33.1	27.4	8.6
Tieton	Rimrock Lake	198.0	157.2	197.3	96.5	142.2
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	701.5	1188.8	511.3	754.4
Skagit	Diablo Reservoir	90.6	86.1	87.5	87.1	85.7
Skagit	Gorge Reservoir	9.8	7.8	8.3	7.8	8.0

1/ Based on Active Storage

* 15-yr. Average 1963-1977

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content o the snow about April 1, 1982, as percent of the same date in 1981 and 1980 an average of record.

Tributary Basin	No. of Courses Average	1982 Snow Water Expressed as percent of 1981	1980	1963-77 Avg
		UPPER COLUMBIA BASIN		
Pend Oreille	17	306	126	102
Kettle	16	169	118	104
Colville	4	350	86	78
Spokane	15	553	151	92
Okanogan	35	236	134	110
Methow	6	184	129	110
Chelan	4	200	130	105
Entiat	10	242	147	110
Wenatchee	10	568	128	106
Yakima	26	484	126	102
Ahtanum	2	254	103	108
		LOWER COLUMBIA BASIN		
Mill Creek	3	1473	146	129
Klickitat	1	-	61	42
Lewis	4	662	-	98
Cowlitz	3	485	127	107
		PUGET SOUND		
White	3	230	141	109
Green	7	813	127	94
Cedar	2	-	147	72
Snoqualmie	2	870	152	99
Skykomish	2	459	130	103
Skagit	15	687	165	98
		OLYMPIC PENINSULA		
Elwha	1	904	236	94
Dungeness	1	389	159	109
Morse Creek	1	433	167	107

PRECIPITATION 1/

Division Average Observations and Departures

Drainage Divisions	FALL Sept-Oct 1981 2/ Observed	Departure	WINTER Nov. 1981 - Mar. 1982 2/ Observed	Departure
Columbia in Canada	5.17	+0.15	17.05	+1.54
Pend Oreille - Spokane	3.56	-0.48	19.70	+2.15
Northeastern Washington	3.28	+0.80	10.12	+0.72
Southeastern Washington	3.03	+0.52	12.95	+2.52
East Slope Cascades	4.87	+0.12	32.22	+4.69
North Central Washington	2.61	+1.02	7.28	+0.74
Northwest Slope Cascades	13.88	+0.67	59.27	+3.88
Southwest Slope Cascades	9.98	+1.30	45.31	+3.67

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages.

East Slope Cascades - Yakima, Wenatchee and Chelan Drainages.

North Central Washington - Methow and Okanogan Drainages.

Northwest Slope Cascades - Puget Sound Drainages.

Southwest Slope Cascades - Lower Columbia Drainages.

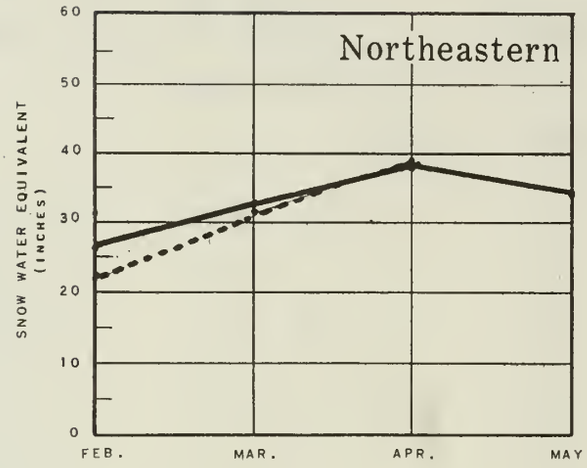
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

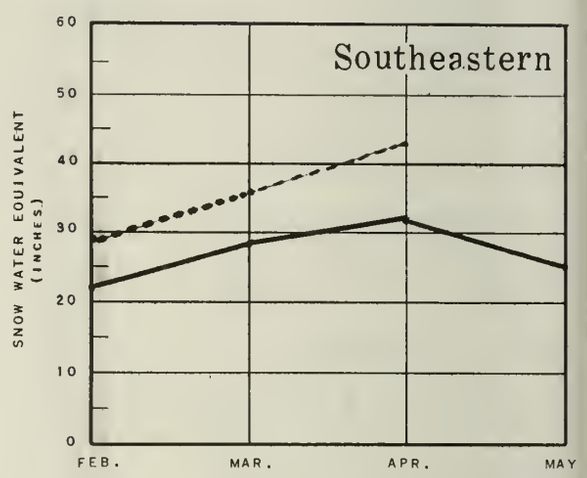
2/ - Departure from 15-year (1958-72) drainage division average.

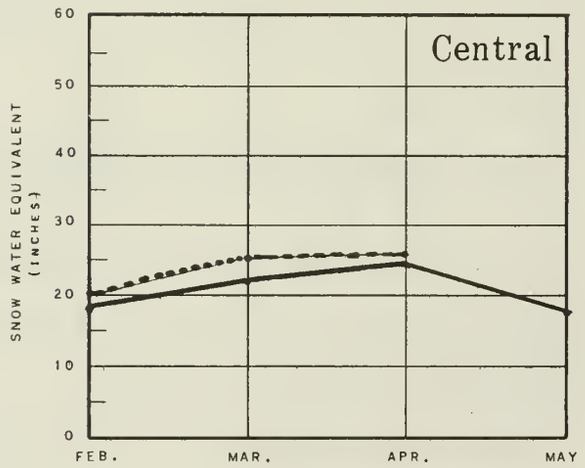
WASHINGTON SNOW COVER

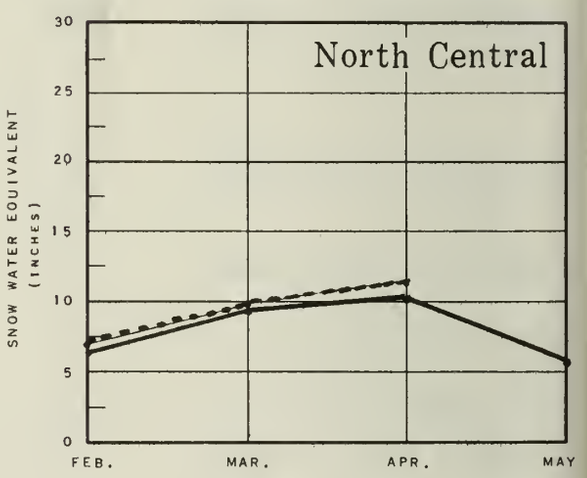
1982

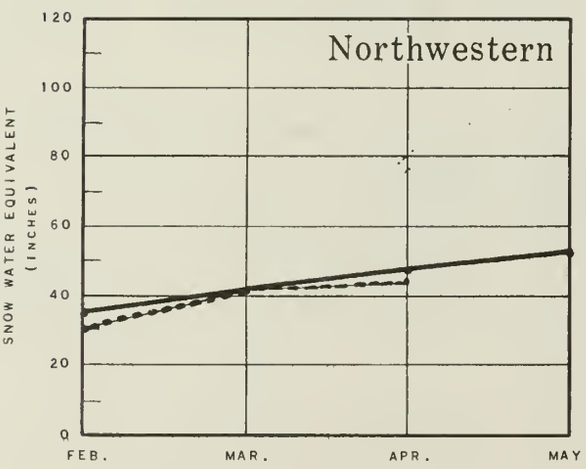
DRAINAGE AREAS

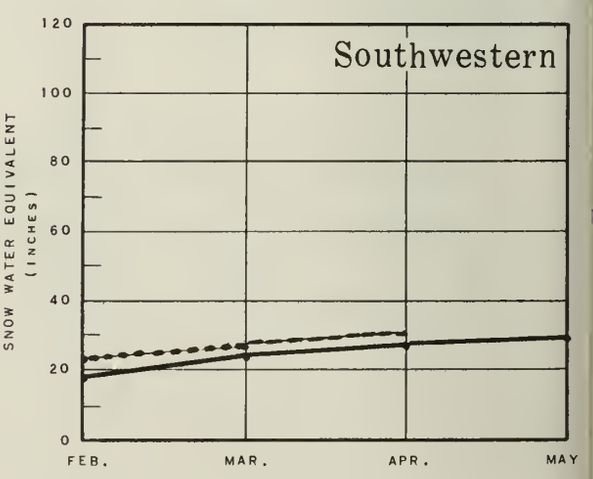












Average ——
1982 - - - -

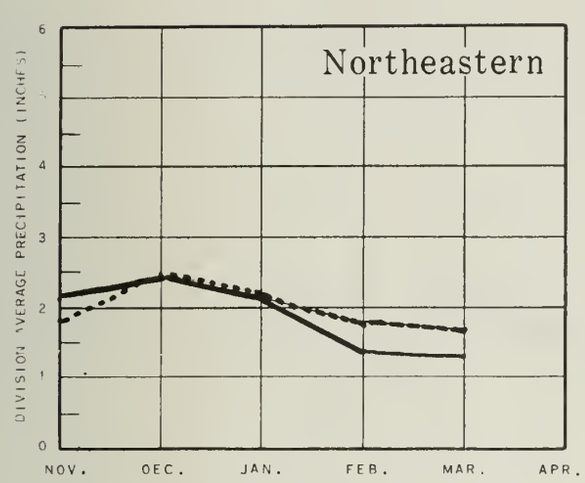
Selected Snow Survey Courses by Soil Conservation Service

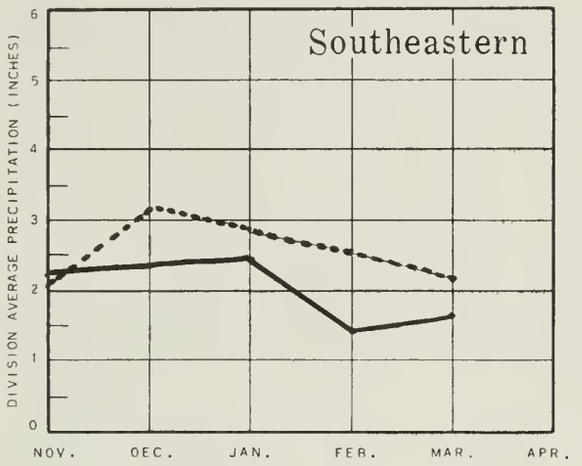
M7-L-22028G

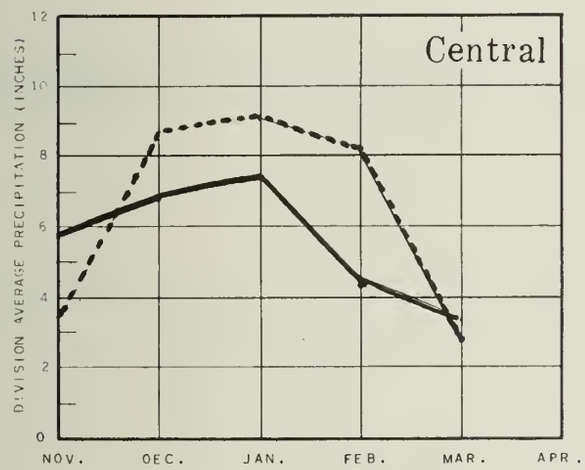
WASHINGTON VALLEY PRECIPITATION

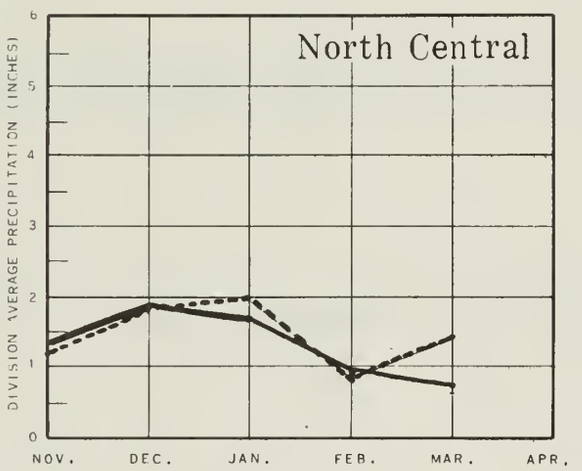
1982

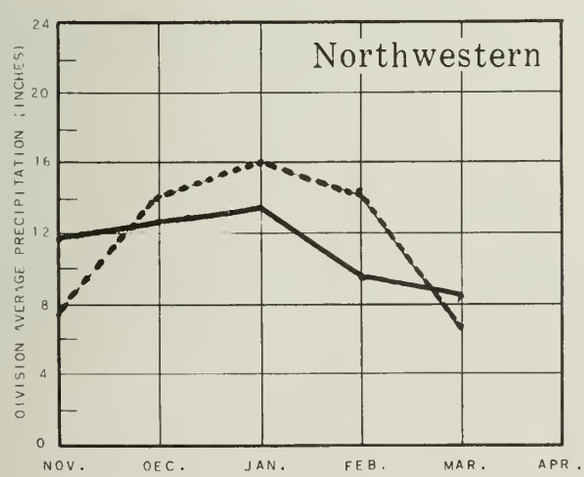
DRAINAGE AREAS

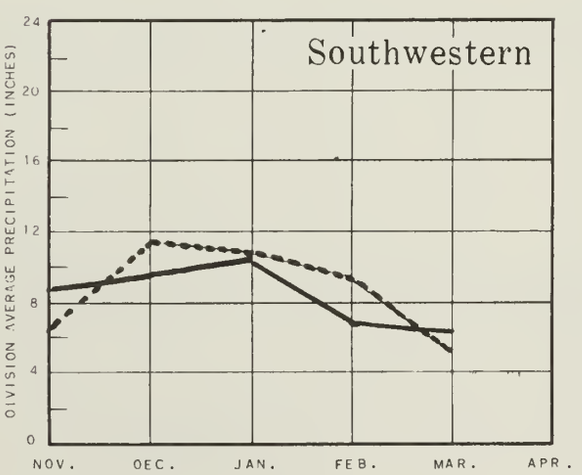






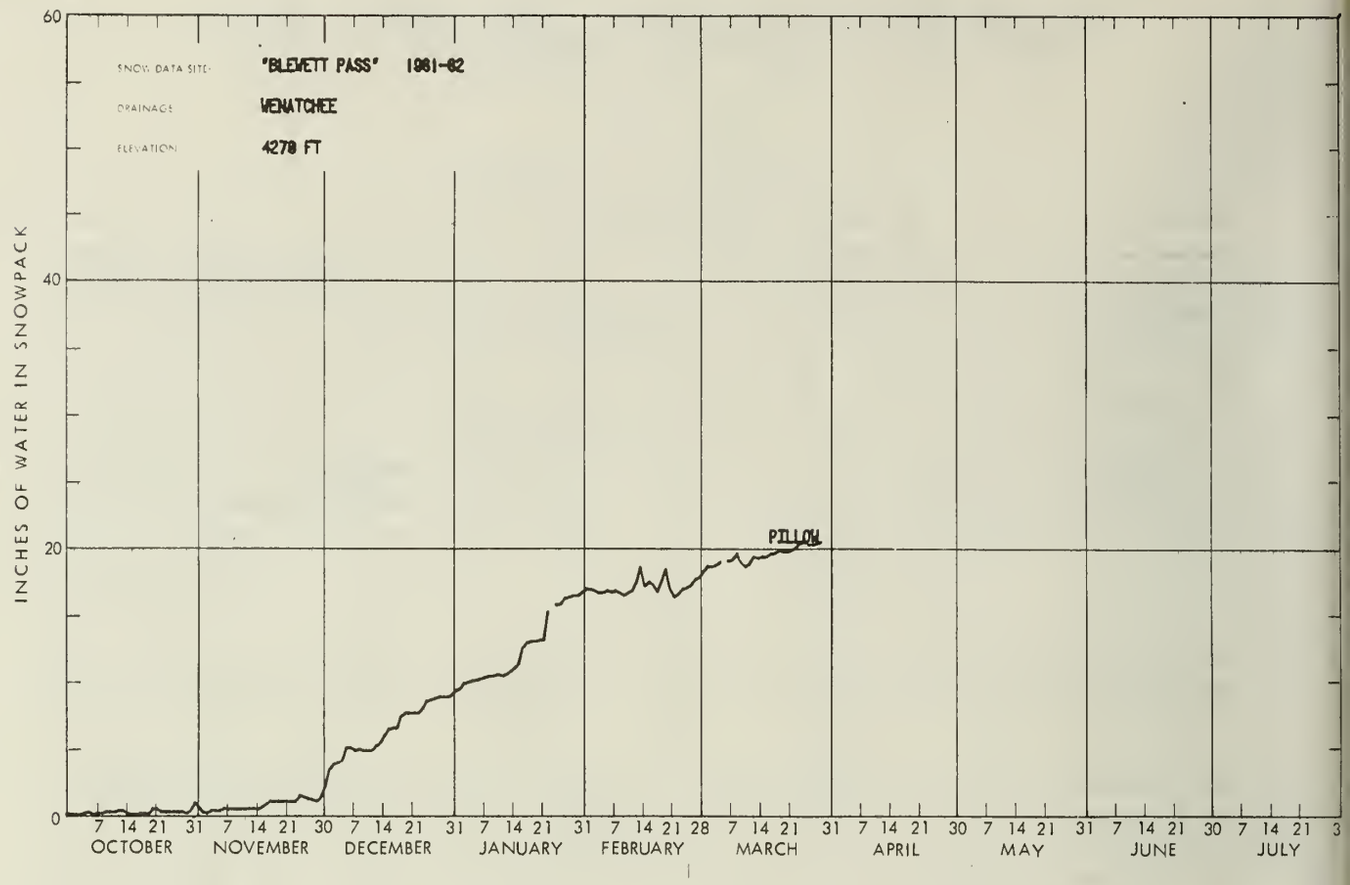






Average: ——————
1982 : - - - - - - - -

Preliminary Analysis by National Weather Service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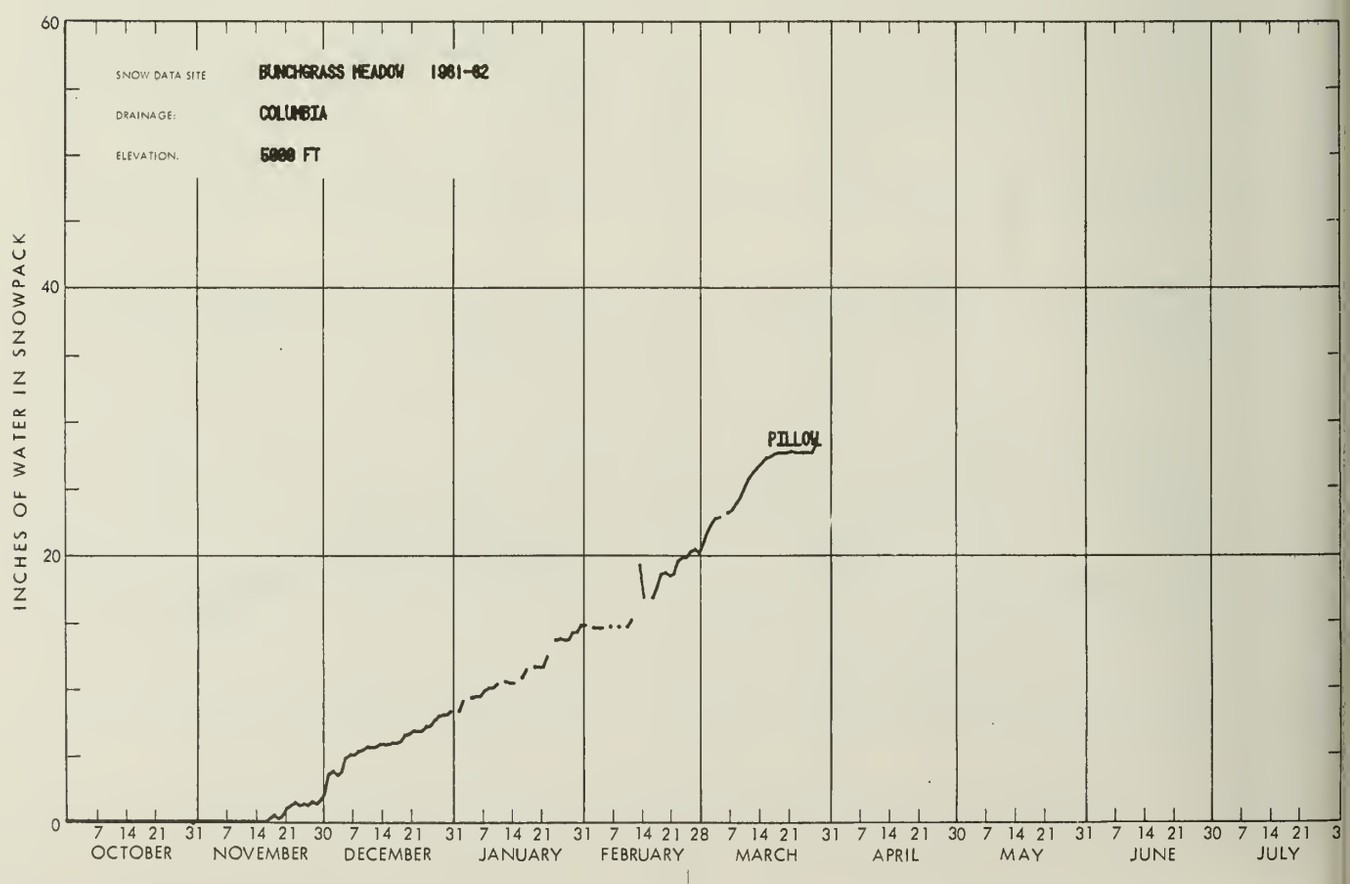
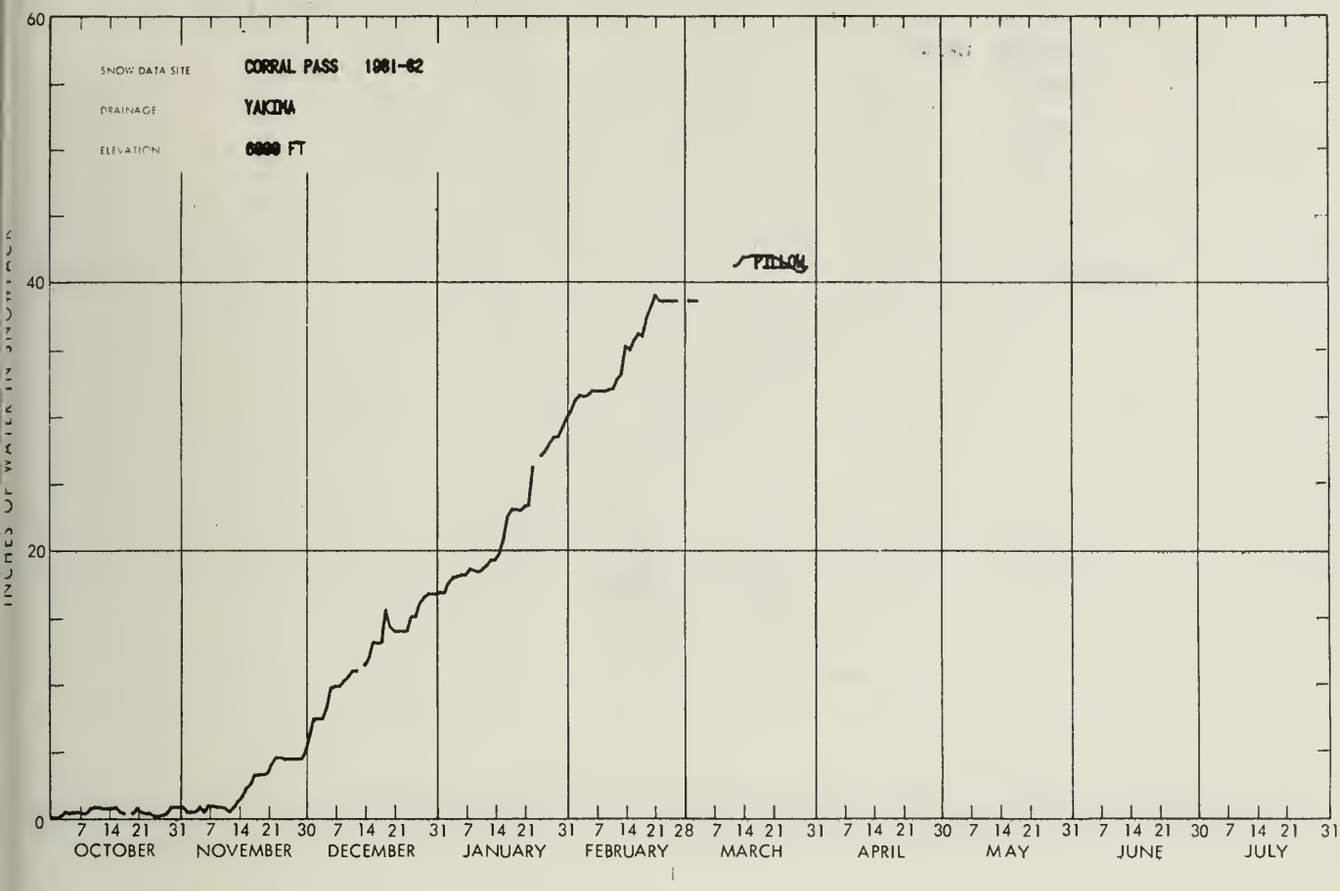
DRAINAGE: WENATCHEE
ELEVATION: 4270 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 3
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: BUNCHGRASS MEADOW 1981-82
DRAINAGE: COLUMBIA
ELEVATION: 5000 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 3
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY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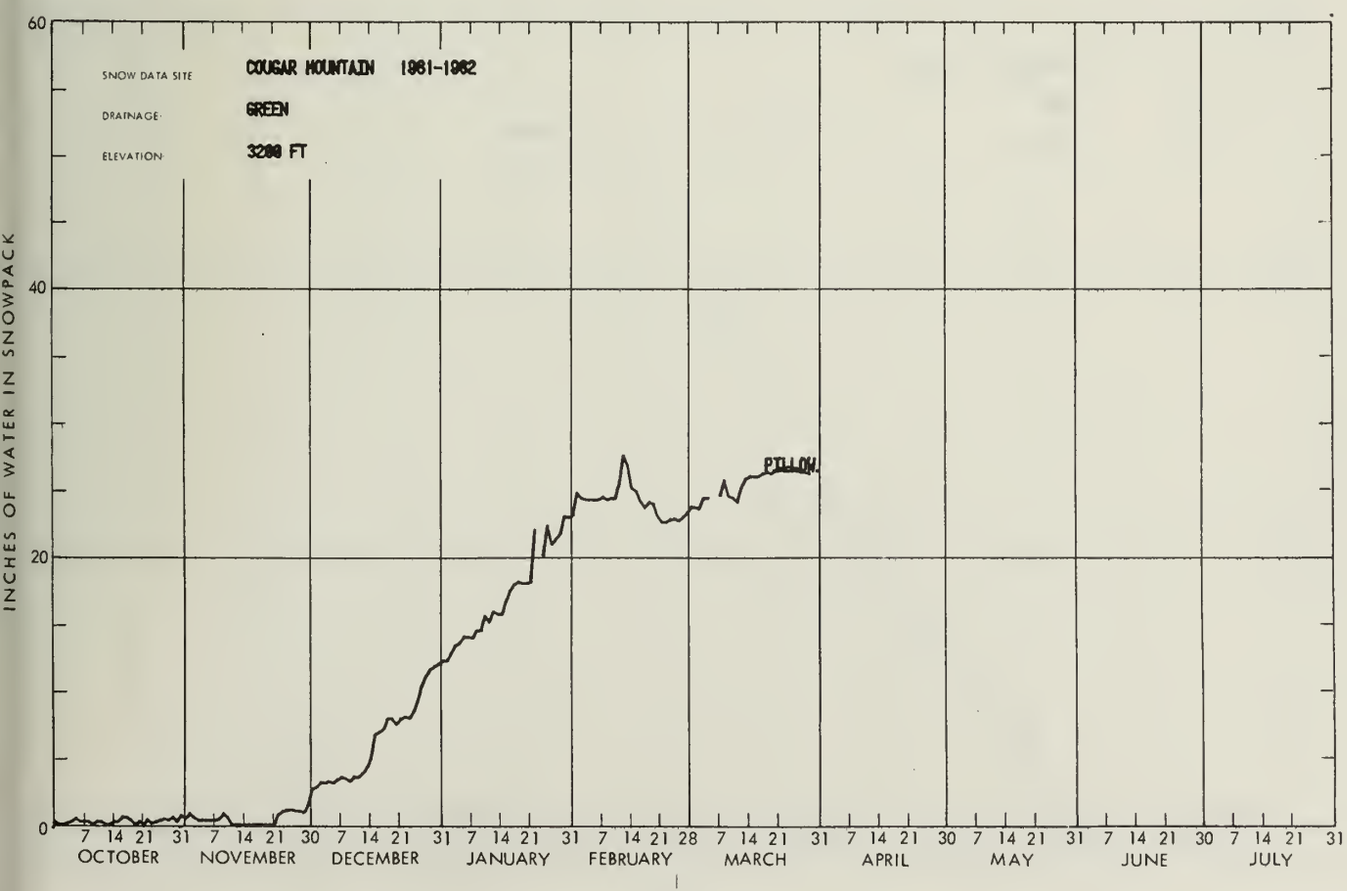
CORRAL PASS 1961-62
DRAINAGE
YAKIMA
ELEVATION
6000 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
COUGAR MOUNTAIN 1961-1962
DRAINAGE
GREEN
ELEVATION
3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
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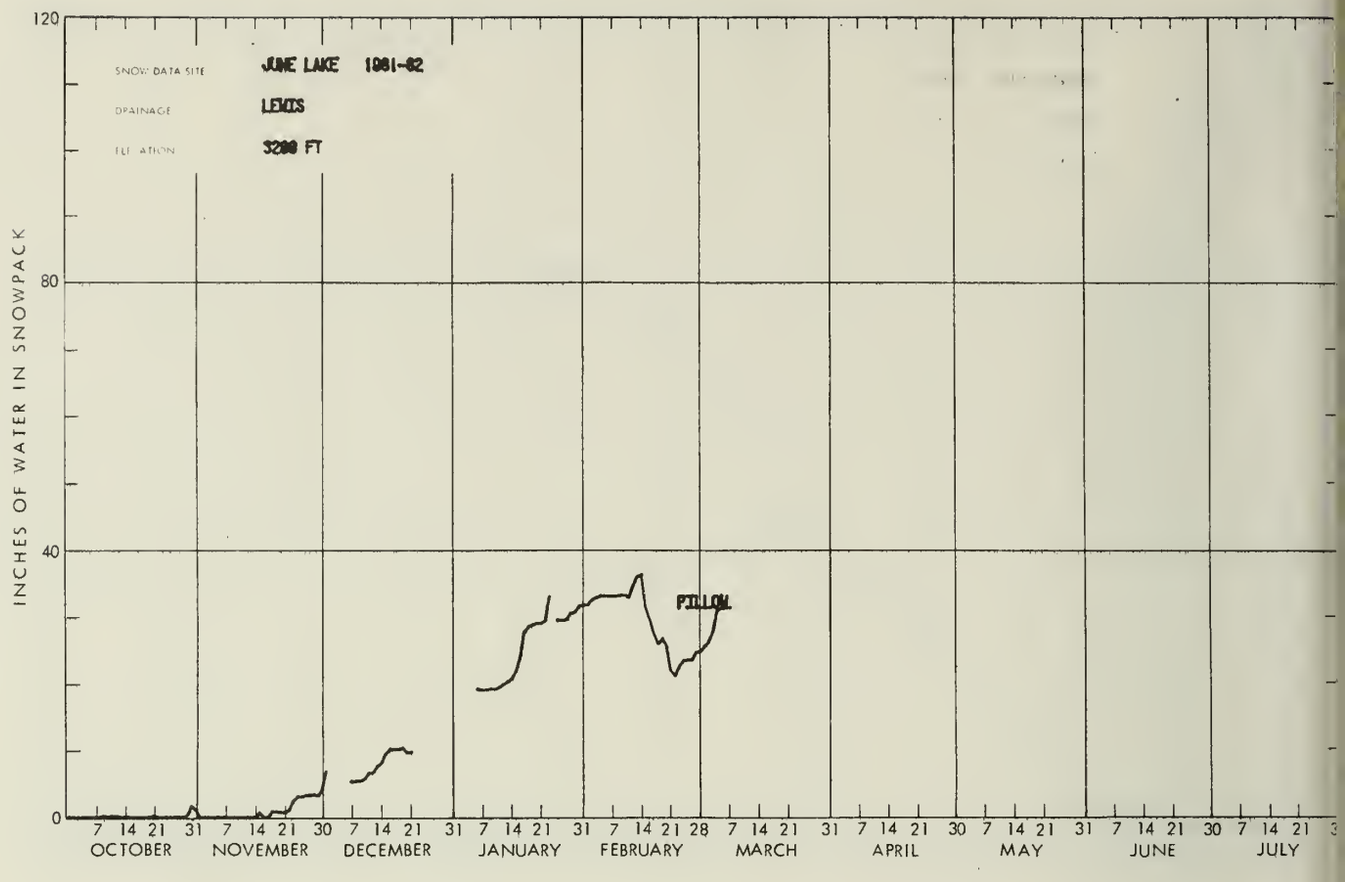
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY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JUNE LAKE 1981-82
DRAINAGE
LEWIS
ELEVATION
9200 FT
INCHES OF WATER IN SNOWPACK
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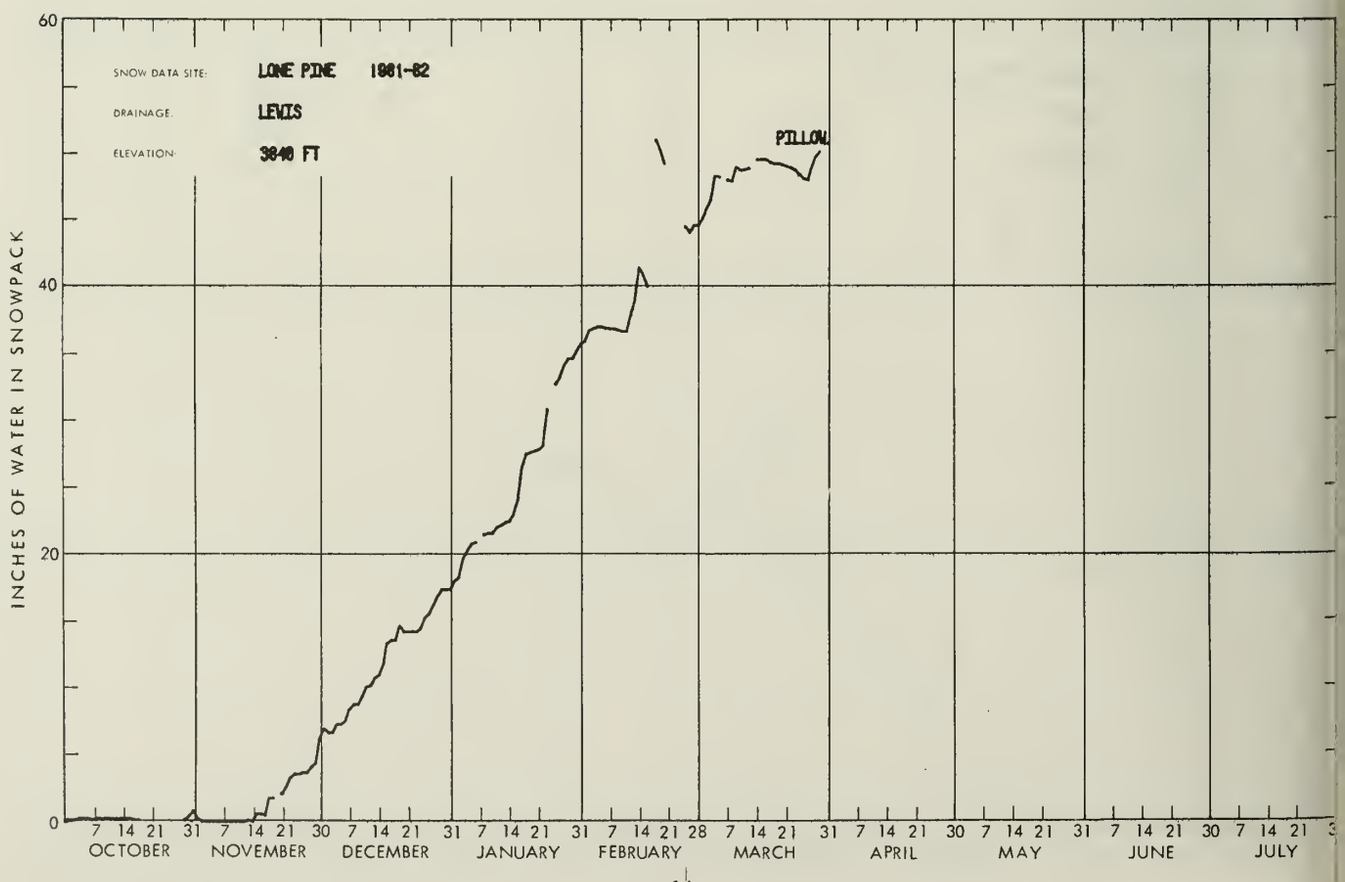
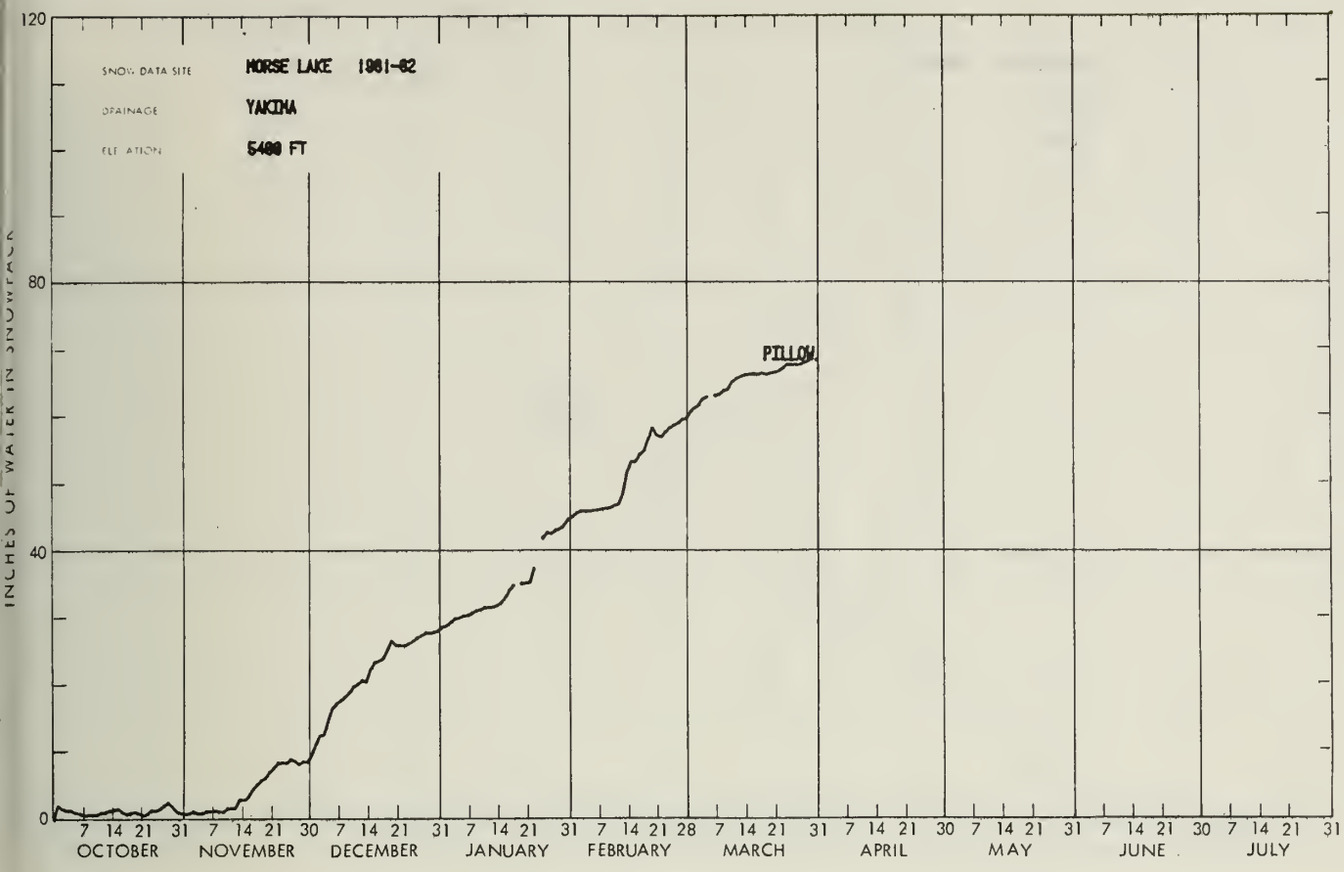
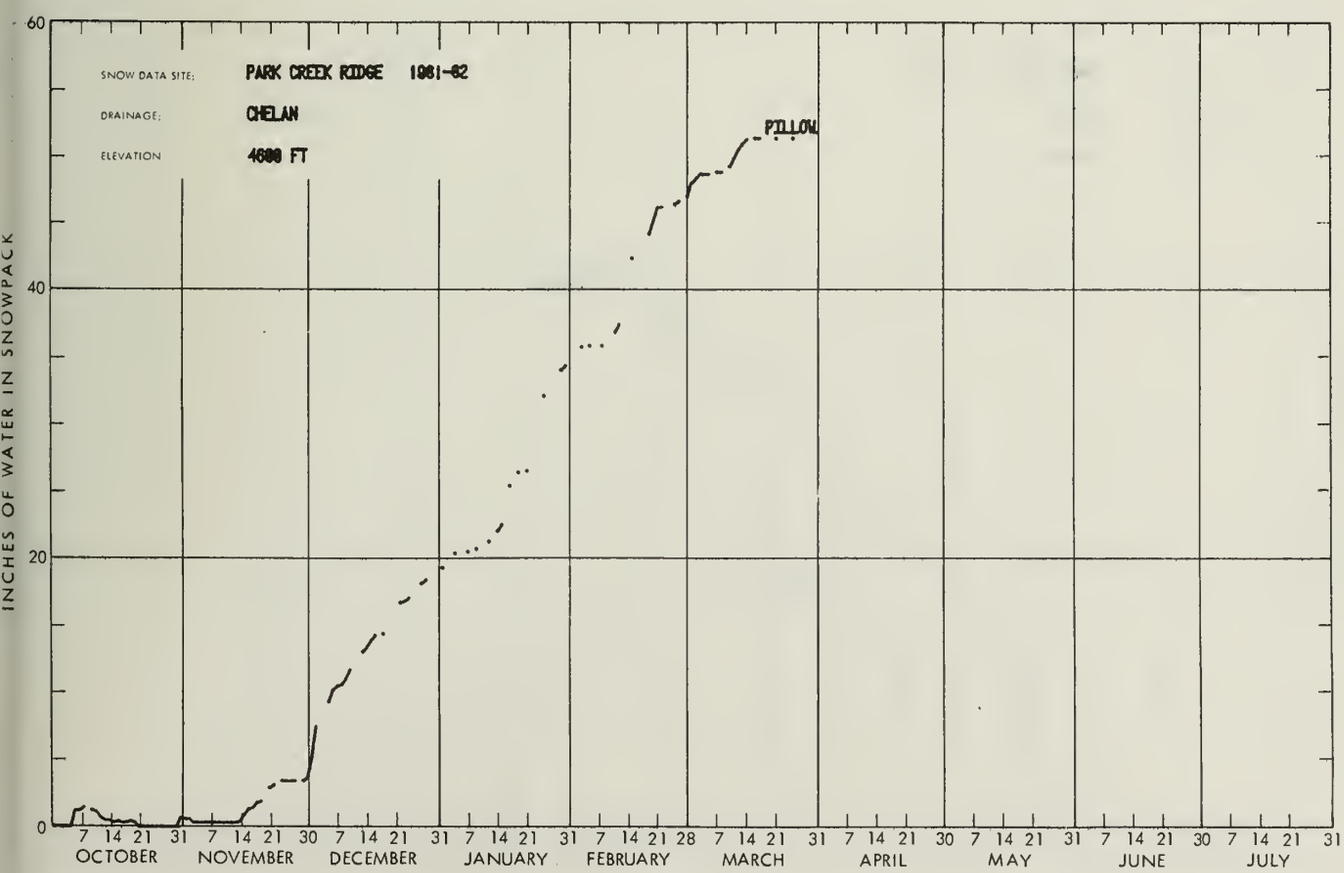
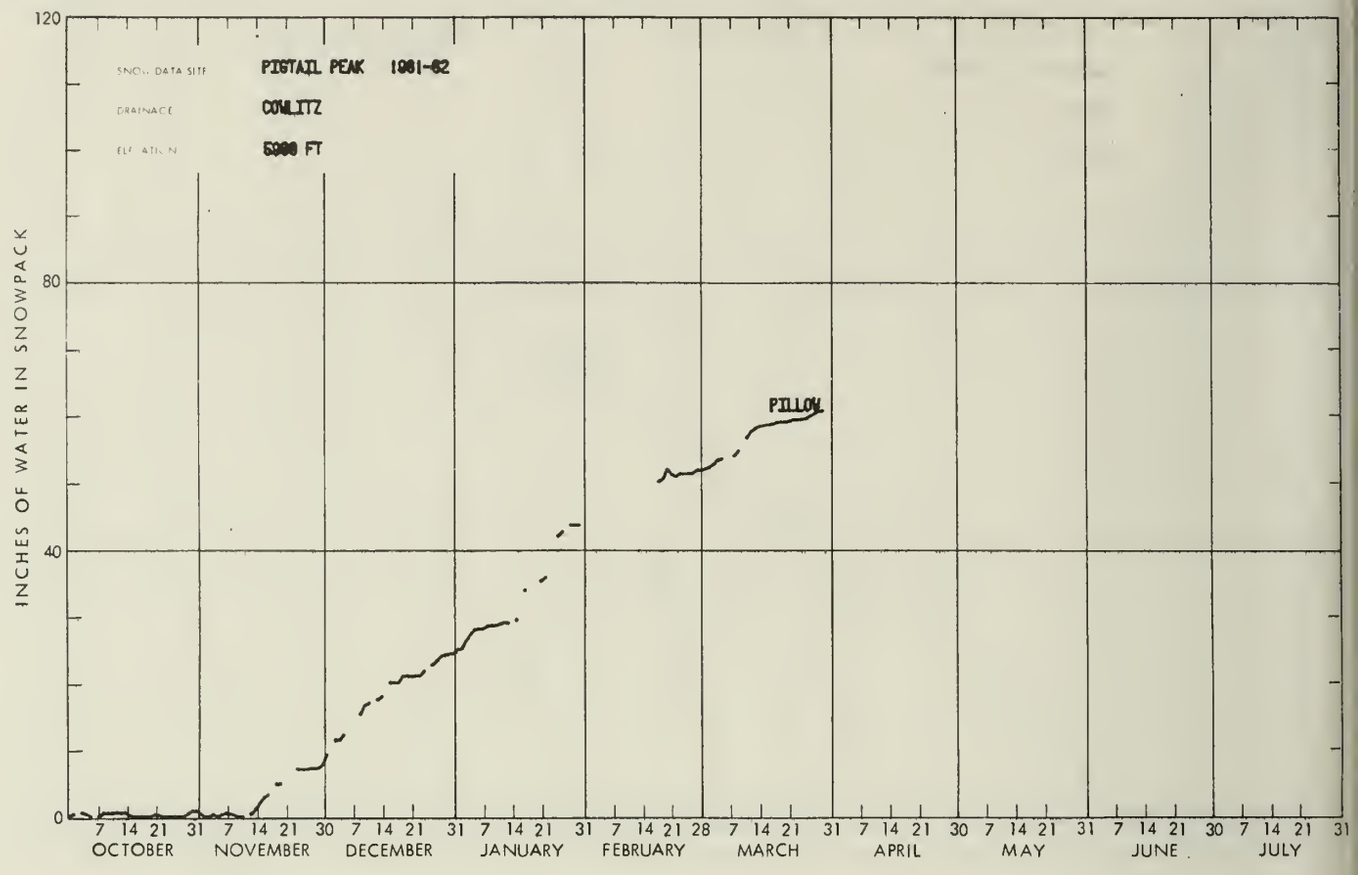
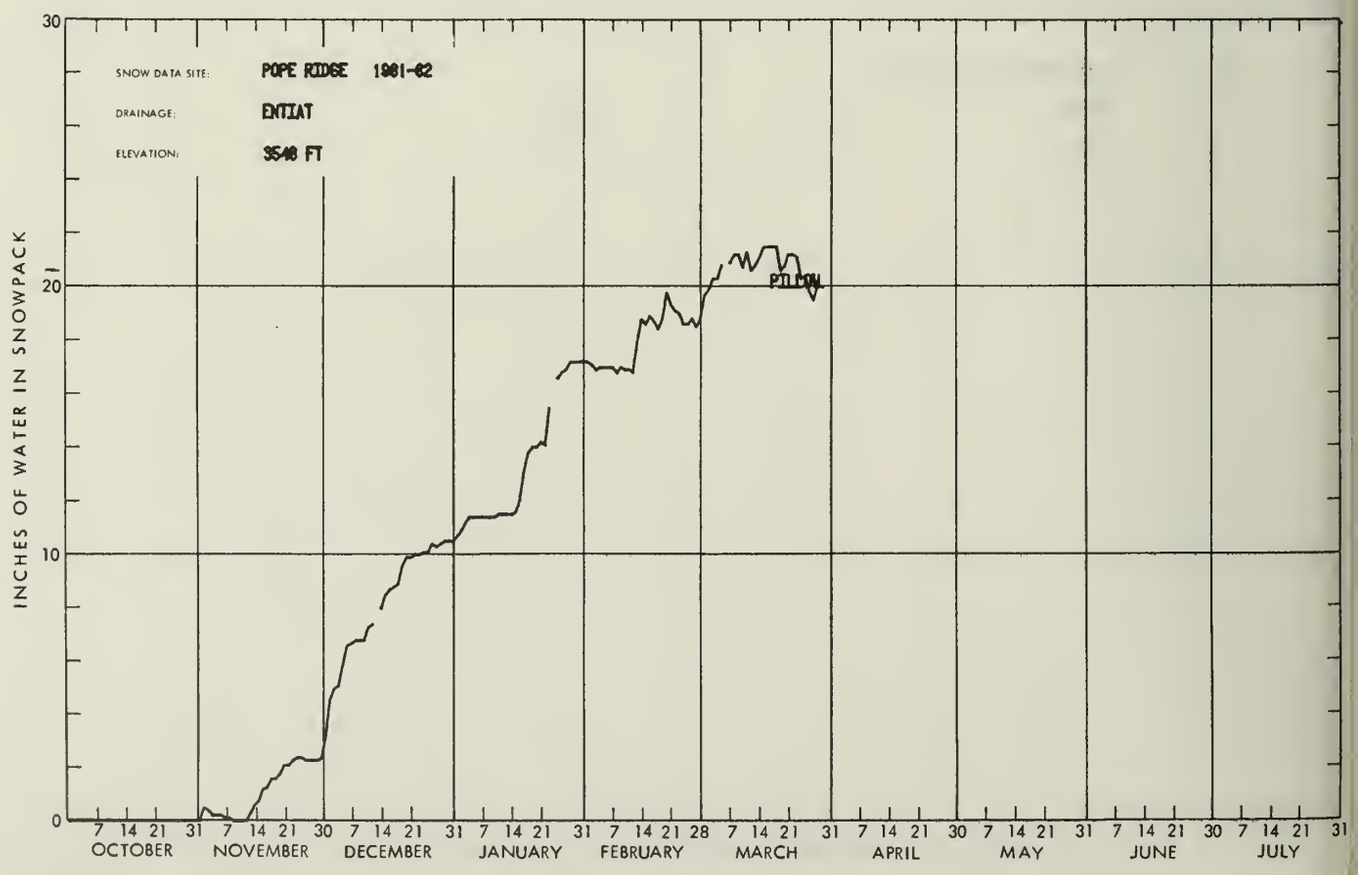
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE:
LONE PINE 1981-82
DRAINAGE:
LEWIS
ELEVATION:
9840 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

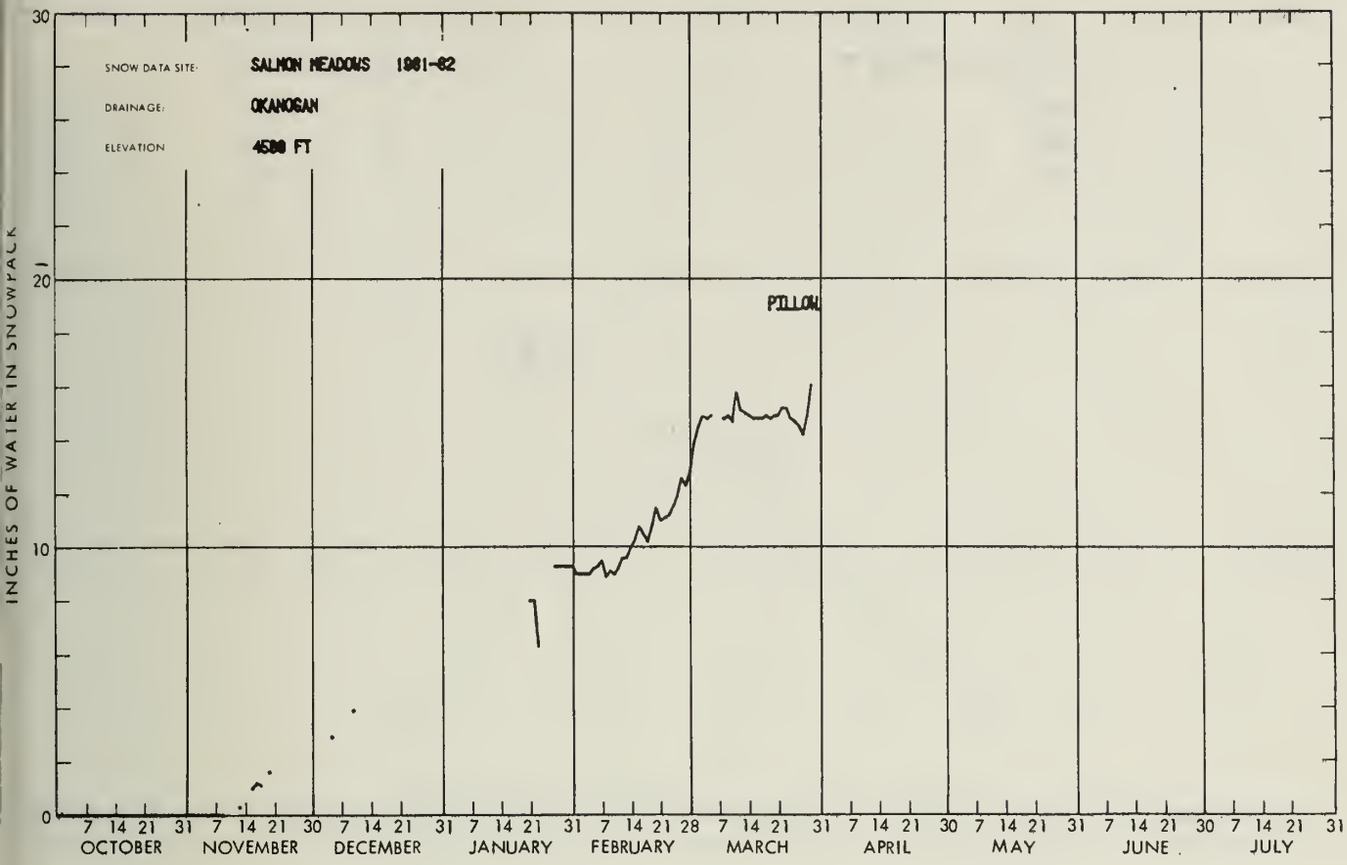

SNOW DATA SITE
MORSE LAKE 1981-82
DRAINAGE
YAKIMA
ELEVATION
5400 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

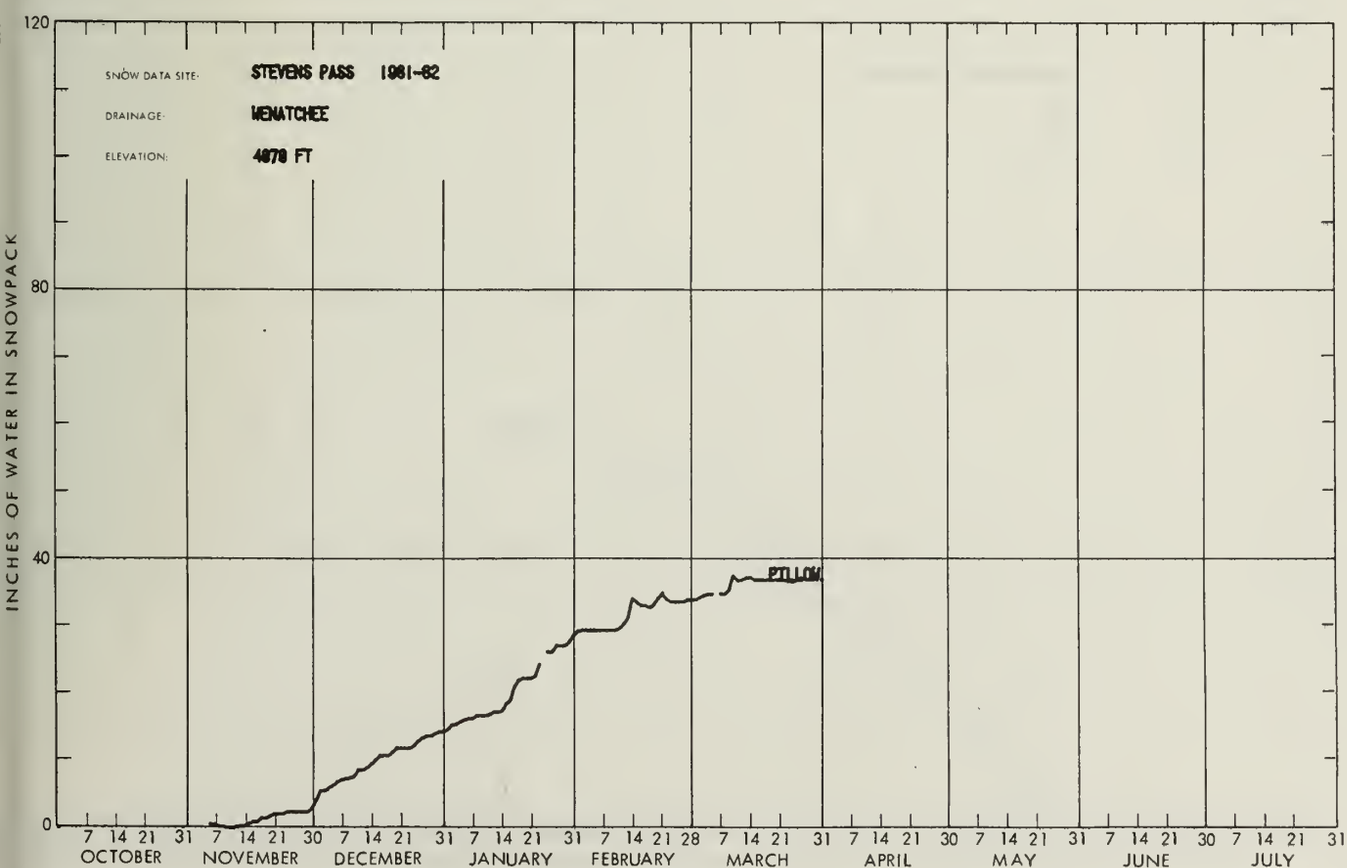

SNOW DATA SITE:
PARK CREEK RIDGE 1981-82
DRAINAGE:
CHELAN
ELEVATION
4600 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

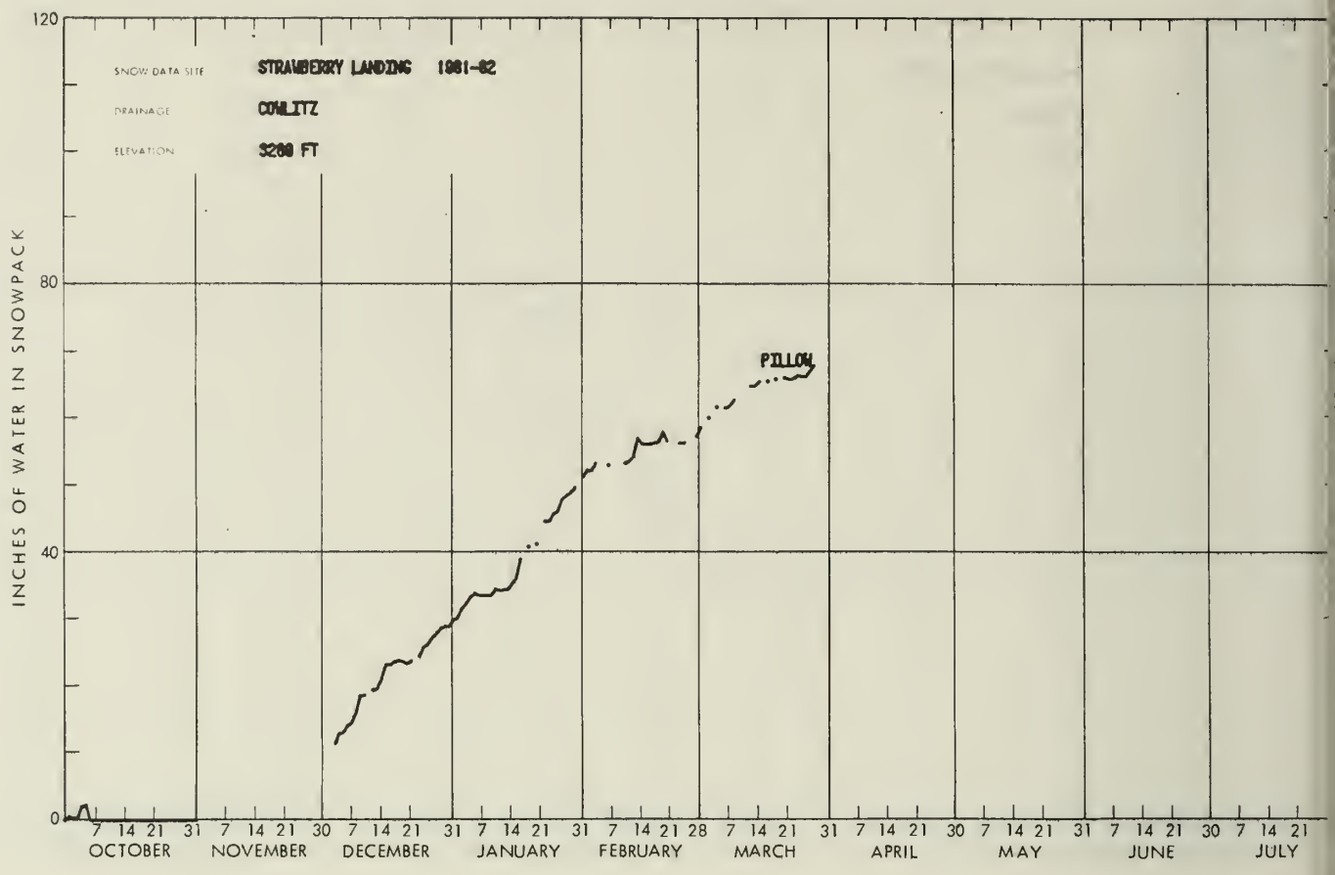

SNOW DATA SITE: PIGTAIL PEAK 1981-82
DRAINAGE: COWLITZ
ELEVATION: 5900 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

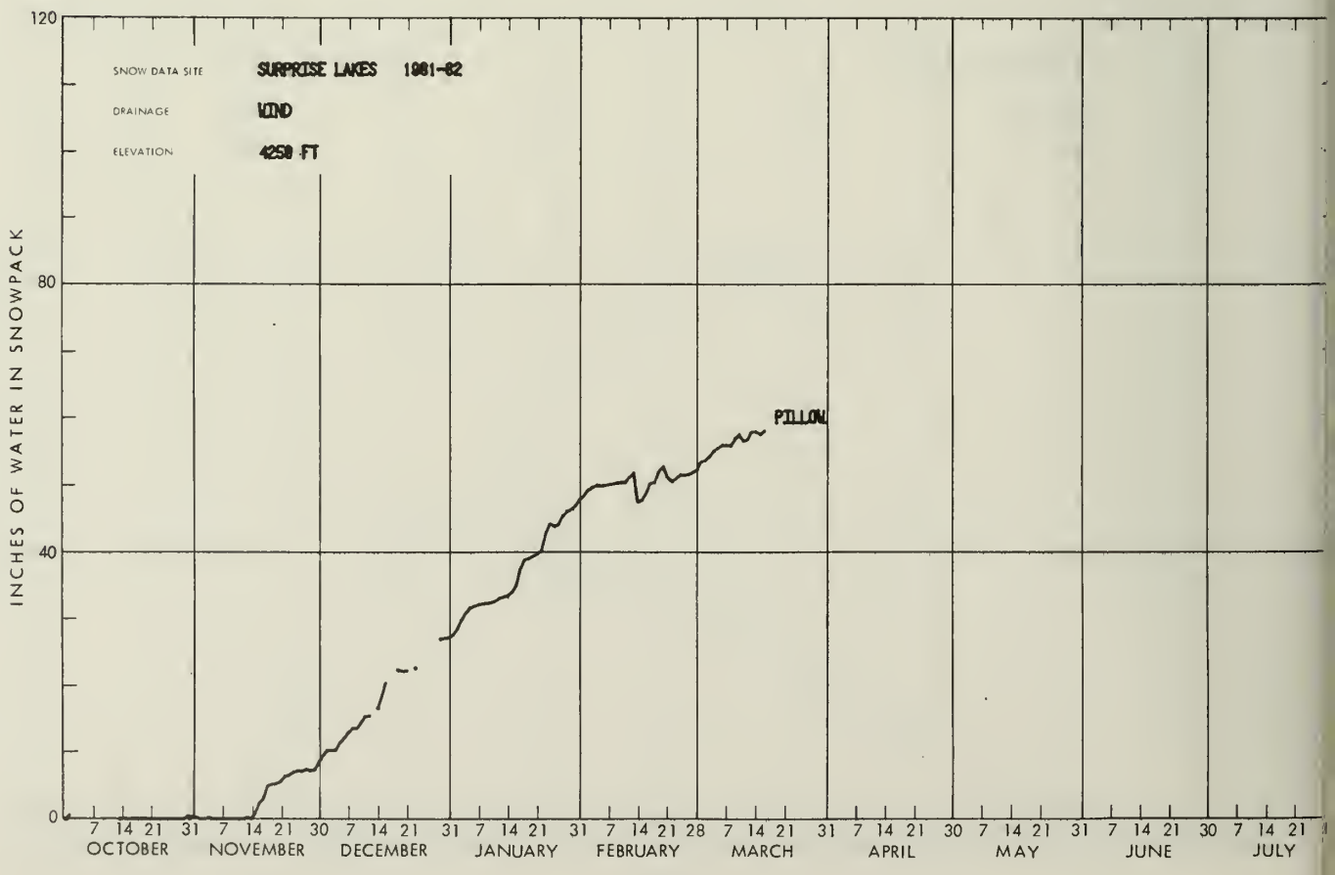

SNOW DATA SITE: POPE RIDGE 1981-82
DRAINAGE: ENTIAT
ELEVATION: 3540 FT
INCHES OF WATER IN SNOWPACK
30
20
10
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

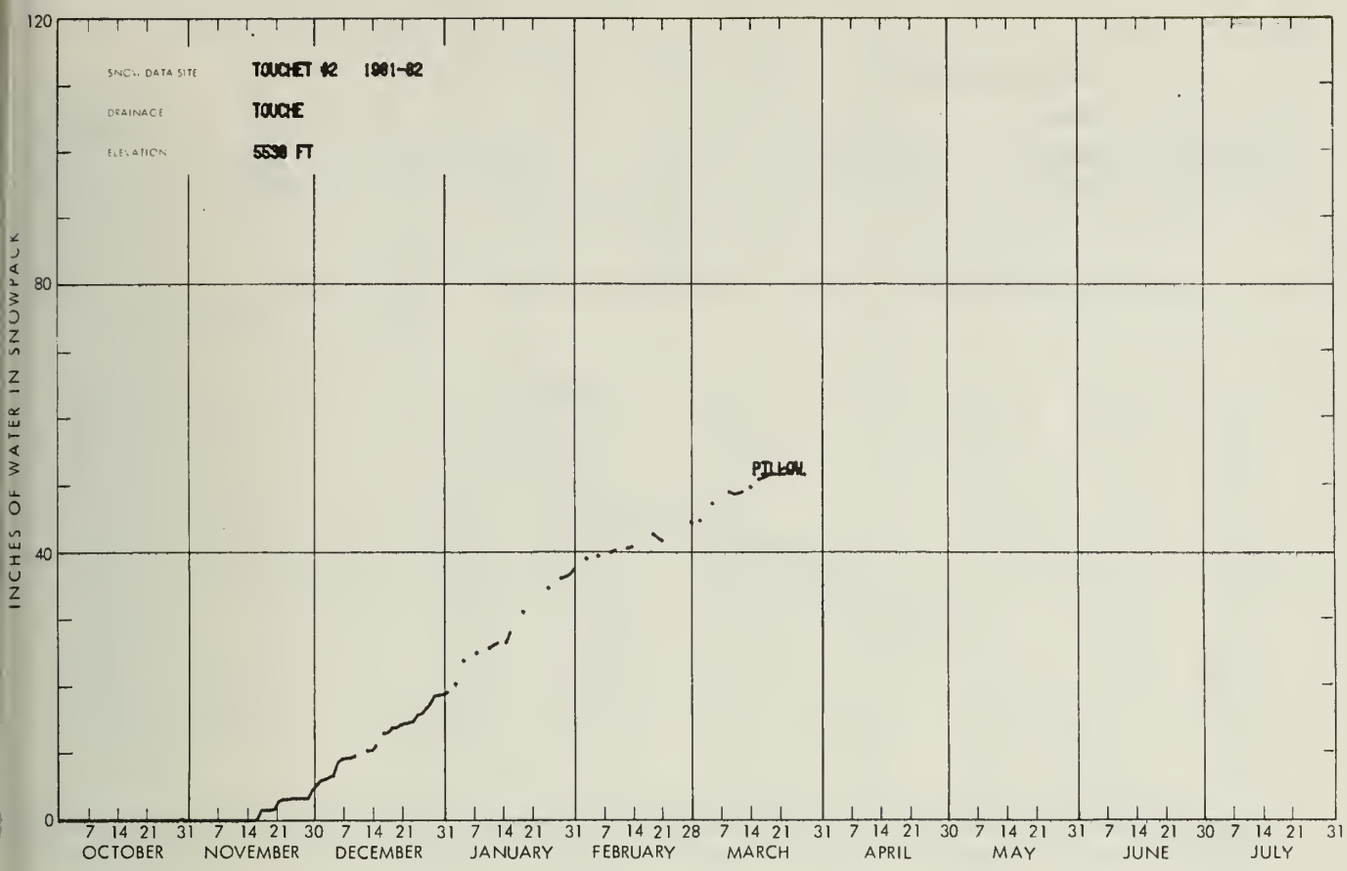
NSFB-X138

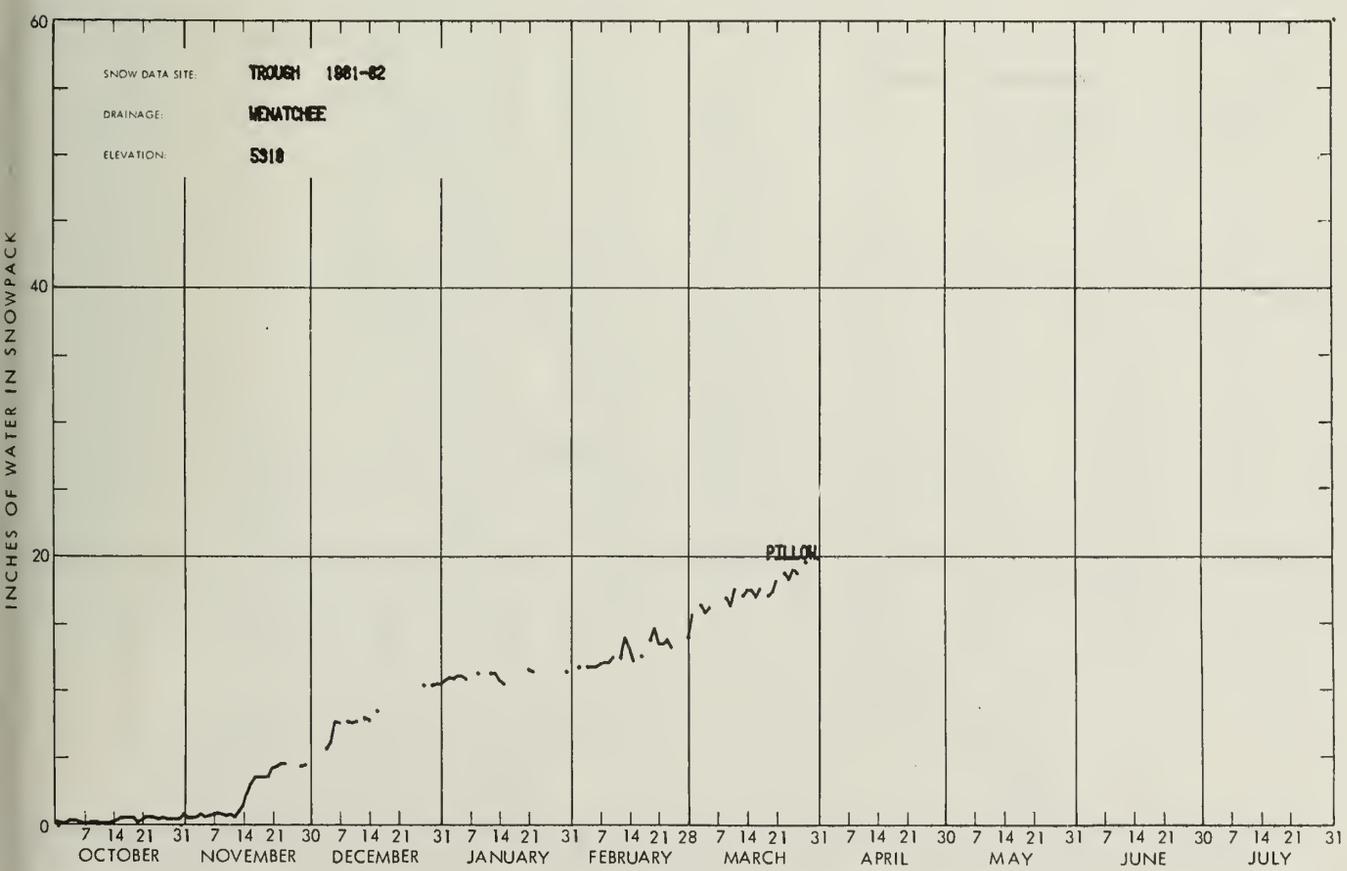

SNOW DATA SITE: SALMON MEADOWS 1981-82
DRAINAGE: OKANOGAN
ELEVATION: 4500 FT
PILLOW
INCHES OF WATER IN SNOWPACK
30
20
10
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: STEVENS PASS 1981-82
DRAINAGE: WENATCHEE
ELEVATION: 4070 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE STRAWBERRY LANDING 1981-82
DRAINAGE COWLITZ
ELEVATION 3200 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE SURPRISE LAKES 1981-82
DRAINAGE WIND
ELEVATION 4250 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
TOUCHET #2 1981-82
DRAINAGE
TOUCHE
ELEVATION
5530 FT
PILLON
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE:
TROUGH 1981-82
DRAINAGE:
WENATCHEE
ELEVATION:
5310
PILLON
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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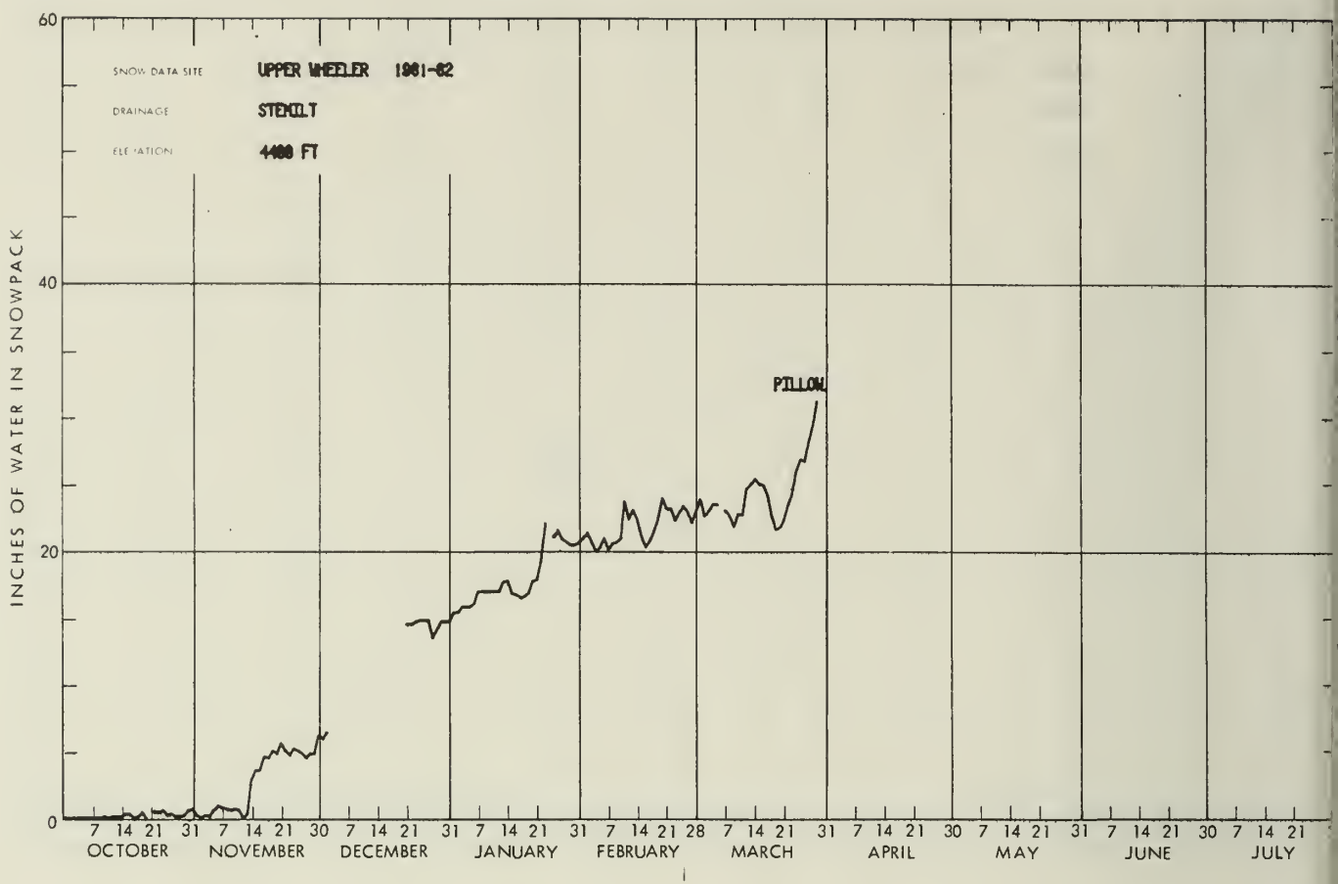
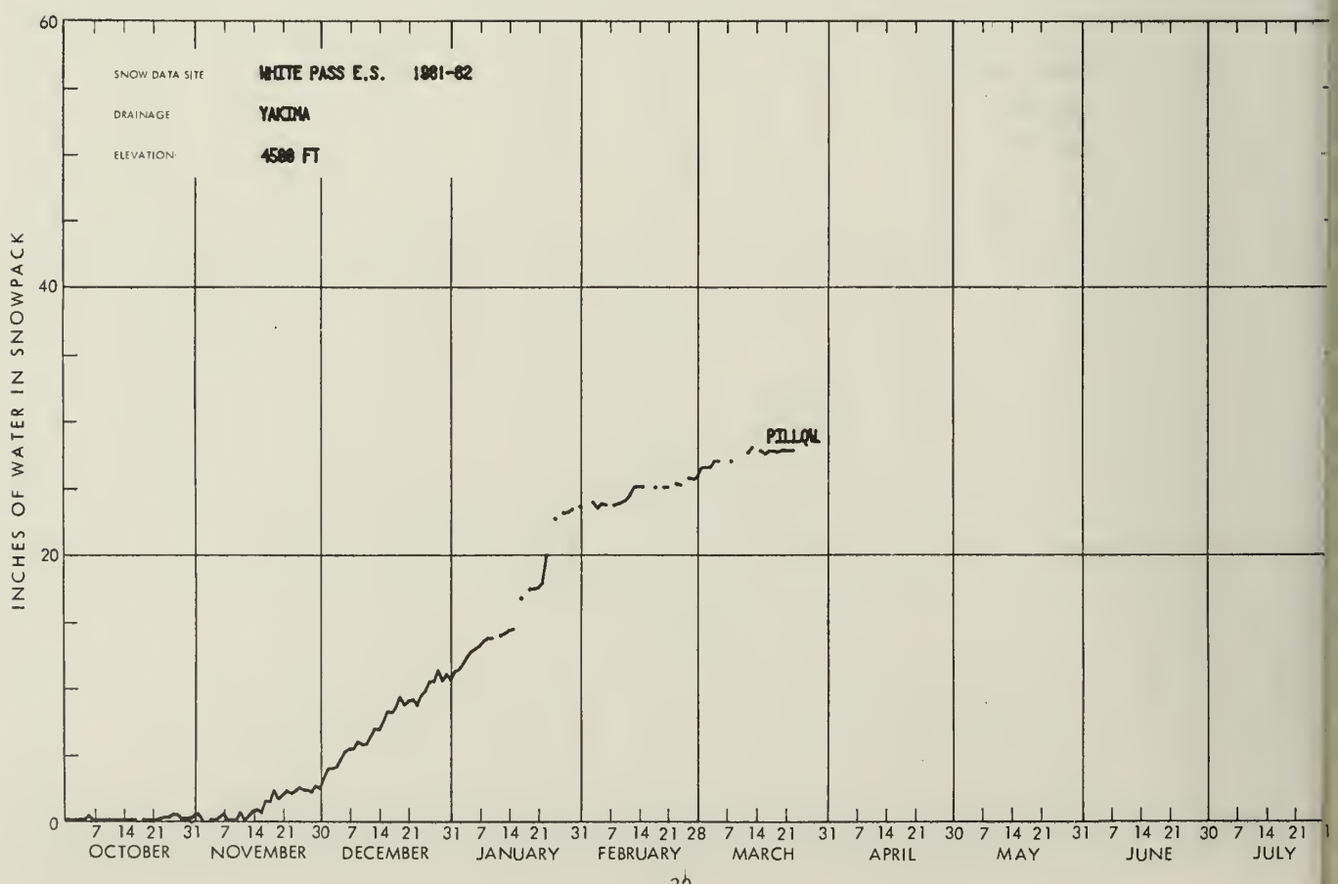

SNOW DATA SITE UPPER WHEELER 1981-82
DRAINAGE STEKOLT
ELEVATION 4400 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE WHITE PASS E.S. 1981-82
DRAINAGE YAKIMA
ELEVATION 4500 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X4-L

SNOW DATA TO APRIL 1, 1982 - APPENDIX 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Water Content (inches) Average #
U P P E R C O L U M B I A D R A I N A G E							
PEND OREILLE RIVER							
Baree Creek	15B11	5500	3/31	121	49.5	28.0	50.3
Baree Midway	15B16	4600	3/30	99	39.5	16.1	38.8
Baree Trail	15B15	3800	3/31	24	9.2	0.5	9.8
Benton Meadow	16A02	2344	3/29	0	0.0	0.0	5.0
Benton Spring	16A03	4900	3/29	52	18.9	9.5	20.2
Boyer Mountain	17A02	5250	3/29	64	25.4	15.3	27.2
Brush Creek Timber	14A13	5000	3/29	34	11.0	3.9	10.6
Bunchgrass Meadow	17A01	5000	3/30	86	33.0	23.2	30.7
Chewelah	17A04	4923	3/28	46	14.6	8.3	17.0
Heart Lake Trail	14C10	4800	3/29	59	24.2	8.2	23.8
Hoodoo Basin	15C10	6000	3/29	148	65.0	34.4	53.6
Hoodoo Creek	15C01	5900	3/29	139	58.5	28.5	49.9
Lookout	15B02	5250	3/15	95	35.0	17.2	38.6
			3/30	97	37.6	17.0	37.1
Mosquito Ridge	16A04A	5100	4/1	109	41.8	25.6	40.2
Nelson	2D04-Can	3050	4/1	46	16.6	8.0	15.5*
Schweitzer Bowl	16A06	4500	4/1	96	38.6	-	30.9
Schweitzer Ridge	16A05	6100	4/1	134	54.5	38.1	47.8
Smith Creek	16A01	4800	3/31	127	52.8	34.2	48.8
Winchester Creek	17A03	2970	3/29	17	7.5	0.0	11.2
KETTLE RIVER							
Barnes Creek	2B06-Can	5300	3/25	59	22.1	16.2	20.7*
Big White Mtn.	2E03-Can	5500	4/1	62	21.7	15.2	20.2*
Bluejoint Mtn.	2E06-Can	7500	3/25	87	33.6	23.5	24.6*
Boulder Road	18A02	1450	3/30	0	0.0	0.0	2.4
Butte Creek	18A03	4070	3/30	33	8.6	5.8	9.5
Cabin Creek	18A08	3170	3/30	29	8.3	5.7	8.3
Carmi	2E02-Can	4100	4/1	27	6.7	3.5	6.4*
Farron # 1	2B02-Can	4000	3/31	47	13.7	10.6	13.2*
Farron # 2	2B02A-Can	4000	3/31	50	14.6	10.7	12.8*
Goat Creek	18A04	3595	3/30	16	4.0	1.1	5.3
Graystoke Lake	2F04-Can	5950	3/30	57	18.2	8.6	18.4*
Monashee Pass	2E01-Can	4500	3/25	46	15.6	11.2	13.9*
Old Glory Mountain	2B03-Can	7000	3/27	83	30.6	25.8	28.7*
Snow Caps Creek	18A05	2150	3/30	0	0.0	0.0	2.2
Snow Caps Trail	18A06	2720	3/30	12	4.2	0.0	4.9
Summit G.S.	18A07	4600	3/30	26	8.0	4.4	8.5
Trapping Creek Lower	2E05-Can	3050	4/1	14	4.1	0.0	3.6*
Trapping Creek Upper	2E04-Can	4450	4/1	33	10.9	6.0	10.0*

\# Average based on 1963-77 Average

* Average for years of record

SNOW DATA TO APRIL 1, 1982 - APPENDIX 2

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average#
COLVILLE RIVER							
Baird	17A06	3215	3/28	12	4.8	0.0	5.6
Carlson	18A09	2885	3/28	0	0.0	0.0	2.6
Chewelah	17A04	4925	3/28	46	14.6	8.3	17.0
Stranger Mountain	17A05	4990	3/28	32	10.5	2.0	14.5
Togo	18A10	3370	3/28	23	8.8	0.0	12.9
SPOKANE RIVER							
Above Burke	15B08	6100	3/30	53	21.4	8.4	24.7
Above Roland	15B07	4350	4/1	83	35.8	13.6	35.2
Below Roland	15B06	3770	4/1	34	14.1	0.0	16.5
Copper Ridge	16B02	4800	3/30	62	26.6	3.6	29.7
Forty-nine Meadows	15B03	5000	4/2	79	28.6	16.2	32.5
Fourth of July Summit	16B03	3100	3/15	19	5.5	0.0	-
			3/31	11	3.2	0.0	8.8
Granite Peak	15B13A	6000	4/2	140	44.2	22.1	46.8
Kellogg Peak	16B05A	5560	4/1	92	36.2	13.6	35.4
Lookout	15B02	5250	3/15	95	35.0	17.2	38.6
			3/30	97	37.6	17.0	37.1
Lost Lake	15B14A	6000	4/2	167	57.5	34.3	61.8
Lower Sands Creek	16B01	3400	3/30	43	16.4	4.2	21.9
Mosquito Ridge	16A04A	5110	4/1	109	41.8	25.6	40.2
Ragged Ridge	17B02	3333	3/9	7.2	2.6	New	New
Roland Summit	15B05A	5200	4/1	106	46.4	13.0	40.1
Sherwin	16C01	3200	3/25	37	15.1	0.4	13.8
Sunset	15B09A	5600	4/1	100	37.0	17.0	36.2
SANPOIL RIVER							
Sherman Creek Pass	18A01	5350	3/31	55	14.3	9.4	15.0
OKANOGAN RIVER							
Aberdeen Lake	1F01A-Can	4300	3/30	29	7.9	2.6	6.1*
Blackwall Peak	2G03-Can	6250	3/31	93	35.1	22.8	34.4*
Bouleau Lake	2F21-Can	4580	3/28	54	16.1	9.4	15.1*
Brenda Mine	2F18-Can	4800	3/29	45	13.9	7.8	13.4*
Brookmere	1C01-Can	3200	3/31	33	7.5	6.9	9.4*
Enderby	1F04-Can	6250	3/30	133	50.9	34.8	38.6*
Esperon Creek Lower	2F15-Can	4400	3/28	43	13.8	7.1	11.8*
Esperon Creek Middle	2F14-Can	4700	3/28	50	16.6	9.1	15.4*
Esperon Creek Upper	2F13-Can	5400	3/28	58	18.6	10.6	18.5*
Freezeout Mdw New	20A38	5000	3/28	85	30.7	17.6	41.0
Grayback Res.	2F08-Can	5225	4/1	39	9.5	5.7	9.2*
Graystoke Lake	2F04-Can	5950	3/30	57	18.2	8.6	18.4*
Hamilton Hill	2G06-Can	4900	3/28	44	16.9	8.6	15.5*

\# Average based on 1963-77 Average
* Average for years of record

SBA SCS-PORTLAND OREGON 1977

SNOW DATA TO APRIL 1, 1982 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OKANOGAN RIVER (Cont.)							
Harts Pass	20A05A	6500	3/27	119	45.1	30.6	48.5
Horseshoe Basin +	19A05a	7000		Not Measured		12.5	19.4
Isintok Lake	2F11-Can	5510	3/27	28	8.3	3.1	8.0*
Lightning Lake	3D02-Can	4000	3/30	41	15.0	5.9	14.2*
Lost Horse Mountain	2G04-Can	6300		Not Measured		6.8	9.3*
Loup Loup	19A07	4650	3/30	40	10.4	6.2	9.2
McCulloch	2F03-Can	4200	3/27	28	7.8	4.1	6.7*
Missezula Mountain	2G05-Can	5100	3/29	35	11.0	6.7	9.0*
Mission Creek	2F05-Can	6000	3/30	67	22.8	13.0	20.1*
Monashee Pass	2E01-Can	4500	3/25	46	15.6	11.2	13.9*
Mount Kobau	2F12-Can	5950	3/27	43	13.6	9.8	12.6*
Muckamuck +	19A09a	6390		Not Measured		-	17.9
Mutton Creek No. 1	19A01	5700	3/30	63	15.6	9.2	14.7
Mutton Creek No. 2 SP	19A11	6000	3/30	-	18.6	5.6	13.0
Nickel Plate Mtn.	2G02-Can	6200	3/30	32	9.4	3.6	8.1*
Oyama Lake	2F19-Can	4400	3/31	30	8.5	3.5	6.9*
Paysayten +	20A28a	4300		Not Measured		16.4	18.7
Postill Lake	2F07-Can	4500	3/31	35	10.1	6.8	9.1*
Rusty Creek	19A03	4000	4/1	34	6.0	3.8	6.6
Salmon Meadows	19A02	4500	4/1	54	11.7	9.2	10.3
Silver Star Mountain	2F10-Can	6050	3/28	92	35.2	20.2	28.3*
Starvation Mtn +	19A10a	6750		Not Measured		17.2	20.7
Summerland Reservoir	2F02-Can	4200	3/27	31	9.4	4.7	9.3*
Sunday Summit	2G01A-Can	4300	3/30	19	6.7	0.4	5.0
Touts Coulee	19A06	2845	3/31	11	1.9	0.0	1.8
Trout Creek	2F01-Can	4700	3/23	24	7.4	2.4	7.5*
Vaseux Creek	2F20-Can	4600	3/30	29	7.4	4.3	6.5*
White Rocks Mountain	2F09-Can	6000	3/29	72	25.5	12.7	23.1*
METHOW RIVER							
Billy Goat Pass +	20A10a	6409		Not Measured		-	38.0
Dollar Watch +	20A29a	7000		Not Measured		-	31.9
Harts Pass	20A05A	6500	3/27	119	45.1	30.6	48.5
Horseshoe Basin +	19A05a	7000		Not Measured		12.5	19.4
Loup Loup	19A07	4650	3/30	40	10.4	6.2	9.2
Mutton Creek No. 1	19A01	5700	3/30	63	15.6	9.2	14.7
Mutton Creek No. 2 SP	19A11	6000	3/30	-	18.6	5.6	13.0
Rusty Creek	19A03	4000	4/1	34	6.0	3.8	6.6
Salmon Meadows	19A02	4500	4/1	54	11.7	9.2	10.3
War Creek Pass +	20A31a	6500		Not Measured		-	44.4
CHELAN LAKE BASIN							
Cloudy Pass +	20A22a	6500		Marker Down		34.3	49.8
Little Meadows +	20A24a	5275	4/1	148	57.7	26.6	49.0
Lyman Lake	20A23A	5900	4/1	165	65.9	37.3	65.5

\# Average based on 1963-77 Average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO APRIL 1, 1982 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
CHELAN LAKE BASIN (Cont.)							
Mirror Lake	20A39	5600	4/1	118	45.1	-	New
Park Creek Ridge	20A12A	4600	4/1	119	49.8	22.3	47.0
Rainy Pass	20A09	4780	3/28	115	42.0	23.1	43.7
Safety Harbor	20A30A	6300		Not Measured		-	32.1
War Creek Pass +	20A31a	6500		Not Measured		-	44.4
ENTIAT RIVER							
Blue Creek G.S.	20B28a	5425	3/24	122	47.6	26.6	43.5
Brief	20B19	1600	3/27	0	0.0	0.0	4.6
Entiat Meadows +	20A33a	4540	3/24	126	49.1	28.9	49.3
Entiat River Trail +	20A34a	3325	3/24	58	24.1	3.8	18.2
Four Mile Ridge +	20B27a	6800	3/24	98	38.2	22.2	37.8
Fox Camp +	20A36a	6510	3/24	158	61.6	46.6	57.8
Pope Ridge	20B20	3540	3/26	55	22.5	7.2	18.9
Pugh Ridge +	20A32a	6725	3/24	107	41.7	27.0	37.5
Shady Pass	20A37	6200	3/26	86	33.9	20.1	32.9
Snow Brushy +	20A35a	3910	3/24	115	47.7	21.7	40.3
Tommy Creek +	20B21a	4900	3/24	73	28.5	10.4	27.3
WENATCHEE RIVER							
Berne-Mill Creek	21B23	2925	3/29	79	32.0	10.0	29.8
Berne-Mill Creek New	21B41SP	3240	3/29	66	28.5	1.9	28.3
Blewett Pass No. 2	20B02	4270	3/26	37	14.9	3.0	16.9
Chiwaukum G.S.	20B16	1810	3/29	30	11.6	0.0	10.2
Fish Lake	21B04	3371	3/26	89	39.9	7.1	35.3
Lake Wenatchee	20B05	1970	3/29	39	15.6	0.0	12.9
Leavenworth R.S.	20B17	1127	3/29	0	0.0	0.0	0.6
Lyman Lake	20A23A	5900	4/1	165	65.9	37.3	65.5
Merritt	20B18	2140	3/29	41	17.5	0.0	15.5
Stevens Pass	21B01	4070	3/29	128	56.8	17.2	54.9
Stevens Pass Sand Shed	21B45	3700	3/29	95	40.6	6.9	39.5
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	3/30	16	5.8	0.9	7.9
Scout-A-Vista	20B04	3400	3/30	19	6.7	2.7	7.3
STEMILT CREEK							
Jump-Off	20B08	4450	3/29	26	8.6	1.4	8.2
Stemilt Slide	20B06	5000	3/29	43	15.0	5.0	13.7
Upper Wheeler	20B07	4400	3/29	13	5.1	0.0	8.7

\# Average based on 1963-77 Average
\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO APRIL 1, 1982 - APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
COLOCKUM CREEK							
Colockum Creek Upper	20B22	5300	3/29	36	12.1	3.9	15.1
Colockum Creek Lower	20B23	4300	3/29	21	6.5	1.8	9.9
Trough # 2	20B25SP	5310	3/29	52	15.5	7.0	New
YAKIMA RIVER							
Ahtanum R.S.	21C11	3100	3/24	8.5	4.6	0.0	6.0
Big Boulder Creek	21B09	3200	3/26	54	24.8	0.0	20.1
Blewett Pass No. 2	20B02	4270	3/26	37	14.9	3.0	16.9
Bumping Lake	21C08	3450	3/12	36	13.2	1.8	17.1
			3/25	31	13.3	0.0	16.5
Bumping Lake New	21C36	3400	3/12	48	18.8	5.6	22.0
			3/25	43	18.5	0.0	21.7
Cayuse Pass	21C06	5300	3/30	209	89.0	36.9	90.3
Colockum Pass	20B09	5370	3/29	51	19.7	8.2	16.6
Cooke Creek	20B10	4123	3/29	Trace	0.0	0.0	5.1
Corral Pass	21B13	6000	4/5	124	51.0	22.4	43.4
Fish Lake	21B04	3371	3/26	89	39.9	7.1	35.3
Green Lake	21C10	6000	3/24	102	48.2	19.0	34.9
Grouse Camp	20B11	5385	3/30	53	20.7	9.8	16.6
High Creek	20B12	2930	3/30	Trace	0.0	0.0	3.6
Joe Lake +	21B46a	4624	3/24	174	88.6	-	70.6
Lake Cle Elum	21B14M	2200	3/10	24	10.9	0.0	10.0
			3/30	16	7.1	0.0	6.7
Lemah Creek +	21B47a	3327	3/24	105	53.4	5.3	46.6
Manashtash	20C01	3935	3/29	3.1	1.0	0.0	3.0
Morse Lake	21C17	5400	3/27	142	65.9	30.0	59.6
Nanum	20B13	3875	3/30	18	5.9	0.0	8.2
Olallie Meadows	21B02	3625	4/5	112	50.0	8.5	51.9
Satus Pass	20D01	4030	3/25	8.7	4.0	0.0	9.6
Stampede Pass SP	21B10	3860	3/15	120	54.4	10.5	41.5
			4/2	112	60.6	9.5	43.9
Trail Creek	20B14	3360	3/29	0	0.0	0.0	0.0
Tunnel Avenue	21B08	2450	3/10	58	24.4	5.2	25.9
			3/30	58	25.3	1.8	24.6
Van Epps Pass +	20B26a	5925	3/24	146	74.3	26.2	57.5
Walters Flat	20B15	3360	3/30	9.8	4.1	0.0	5.5
Waptus Lake +	21B49a	3024	3/24	108	55.0	12.7	44.5
White Pass (E. Side)	21C28	4500	3/11	71	28.2	5.9	25.1
			3/26	67	29.8	6.3	26.0
AHTANUM CREEK							
Ahtanum R.S.	21C11	3100	3/24	8.5	4.6	0.0	6.0
Green Lake	21C10	6000	3/24	102	48.2	19.0	34.9

\# Average based on 1963-77 Average

\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO APRIL 1, 1982 - APPENDIX 6

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
LOWER COLUMBIA DRAINAGES							
ASOTIN CREEK							
Spruce Springs	17C04	5700	3/29	68	28.0	10.4	26.4
MILL CREEK							
Homestead	17C01	4030	3/24	29	11.9	0.5	8.9
Martin Springs	17C02	4400	3/24	42	17.9	1.0	14.9
High Ridge	18D19	4150	4/1	101	42.9	17.2	32.3
KLICKITAT RIVER							
Satus Pass	20D01	4030	3/25	8.7	4.0	0.0	9.6
LEWIS RIVER							
June Lake	22C05	3200	4/1	62	25.5	5.1	40.2
Lone Pine Shelter	21C26	3800	4/1	-	51.3	11.8	43.2
Plains of Abraham	22C01	4400		Not Measured		7.1	72.0
Sheep Canyon	22C10SP	4050	3/30	117	53.6	5.4	New
Spencer Meadow	21C20a	3400		Not Measured		10.3	25.7
Surprise Lakes	21C13A	4250	4/1	-	59.6	8.3	53.7
COWLITZ RIVER							
Cayuse Pass	21C06	5300	3/30	209	89.0	36.9	90.3
Strawberry Landing	22C08SP	3280	4/1	-	70.3	9.5	New
White Pass (E. Side)	21C28	4500	3/11	71	28.2	5.9	25.1
			3/26	67	29.8	6.3	26.0
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	3/20	209	89.0	36.9	90.3
Corral Pass	21B13	6000	4/5	124	51.0	22.4	43.4
Morse Lake	21C17	5400	3/27	142	65.9	30.0	59.6
GREEN RIVER							
Airstrip	21B24	1800	3/29	0	0.0	0.0	2.1
Charley Creek	21B25	1200	3/29	0	0.0	0.0	0.0
Cougar Mountain SP	21B42SP	3200	4/1	58	25.7	3.3	25.1
Grass Mtn. No. 2	21B27	2900	3/29	34	12.0	1.2	24.3
Grass Mtn. No. 3	21B28	2100	3/29	0	0.0	0.0	4.9
Lester Creek	21B29	3100	3/29	66	22.6	1.8	27.5
Lynn Lake	21B50	4000	3/29	66	25.7	2.7	29.8
Sawmill Ridge	21B31	4700	3/29	94	36.8	13.2	41.6
Snowshoe Butte SP	21B43SP	5000	4/5	146	62.5	19.8	59.8
Stampede Pass SP	21B10	3860	3/15	120	54.4	10.5	41.5
			4/2	112	60.6	9.5	43.9
Twin Camp	21B30	4100	3/29	76	30.0	2.4	27.8

Average based on 1963-77 Average

SNOW DATA TO APRIL 1, 1982 - APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches) Last Year	Average #
CEDAR RIVER							
City Cabin	21B03	2390	3/29	32	13.5	0.0	20.0
Mt. Gardner	21B21	3300	3/29	35	15.3	0.0	19.8
SNOQUALMIE RIVER							
Alpine Meadow	21B48	3500	3/28	124	56.4	4.9	55.2
Olallie Meadows	21B02	3625	4/5	112	50.0	8.5	51.9
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	3/29	128	56.8	17.2	54.9
Stevens Pass Sand Shed	21B45	3700	3/29	95	40.6	6.9	39.5
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	3/28	39	15.4	0.0	15.4
Beaver Pass	21A01	3680	3/27	90	36.2	5.7	35.0
Brown Top Ridge +	21A28a	6000	3/27	166	65.6	39.0	74.2
Cloudy Pass +	20A22a	6500		Not Measured		34.3	49.8
Devils Park	20A04	5900	3/27	119	45.4	29.0	47.7
Freezeout Creek Trail	20A01	3500	3/28	43	14.6	0.3	13.7
Freezeout Meadows New	20A38	5000	3/28	85	30.7	17.6	41.0
Granite Creek	20A06	3500	3/28	59	20.7	6.4	22.3
Harts Pass	20A05A	6500	3/27	119	45.1	30.6	48.5
Klesilkwa	3D03A-Can	3700	4/1	49	19.9	0.0	14.8*
Lightning Lake	3D02-Can	4000	3/30	41	15.0	5.9	14.2*
Lyman Lake	20A23A	5900	4/1	165	65.9	37.3	65.5
Meadow Cabins	20A08	1900	3/27	17	6.6	0.0	6.6
New Hozomeen Lake	21A30	2800	3/28	35	12.7	0.0	15.2
New Tashme	3D01A-Can	2500	3/31	35	11.9	0.0	10.6*
Rainy Pass	20A09	4780	3/28	115	42.0	23.1	43.7
Thunder Basin	20A07	4200	3/27	68	24.4	5.2	24.7
BAKER RIVER							
Dock Butte	21A11A	3800		Late Report		-	74.5
Easy Pass	21A07A	5200		Late Report		-	88.7
Jasper Pass	21A06A	5400		Late Report		-	92.6
Marten Lake	21A09A	3600		Late Report		-	82.8
Mount Blum +	21A18a	5800		Late Report		-	65.9
Panorama New	21A26	4300		Late Report		16.3	77.0
Rocky Creek	21A12A	2100		Late Report		-	34.4
Schreibers Meadow	21A10A	3400		Late Report		-	68.8
S. F. Thunder Creek	21A14A	2200		Late Report		-	7.9
Watson Lakes	21A08A	4500		Late Report		-	72.3

\# Average based on 1963-77 Average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO APRIL 1, 1982 - APPENDIX 8

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OLYMPIC PENINSULA							
DUNGENESS RIVER							
Deer Park	23B04	5200	3/29	69	24.9	6.4	22.9
MORSE CREEK							
Cox Valley	23B14	4500	3/28	116	47.6	11.0	44.3
ELWHA RIVER							
Hurricane	23B03	4500	3/27	70	25.3	2.8	26.9

Average based on 1963-77 Average

73
wwa

Water Supply Outlook For Washington

SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

EPARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
May 1, 1982

USDA SCS PORTLAND OR 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts ond appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early seoson forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth ond water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported os snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There ore about 1900 snow courses in Western United States ond in the Columbio Basin in British Columbia. Networks of automotic snow woter equivolent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow woter and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in stote ond local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at volley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dotes from Jonuory 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Aloska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Aloska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizono 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idoho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevoda 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South Stote St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

☆ GPO 1981 593-783

WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D C

Released by

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

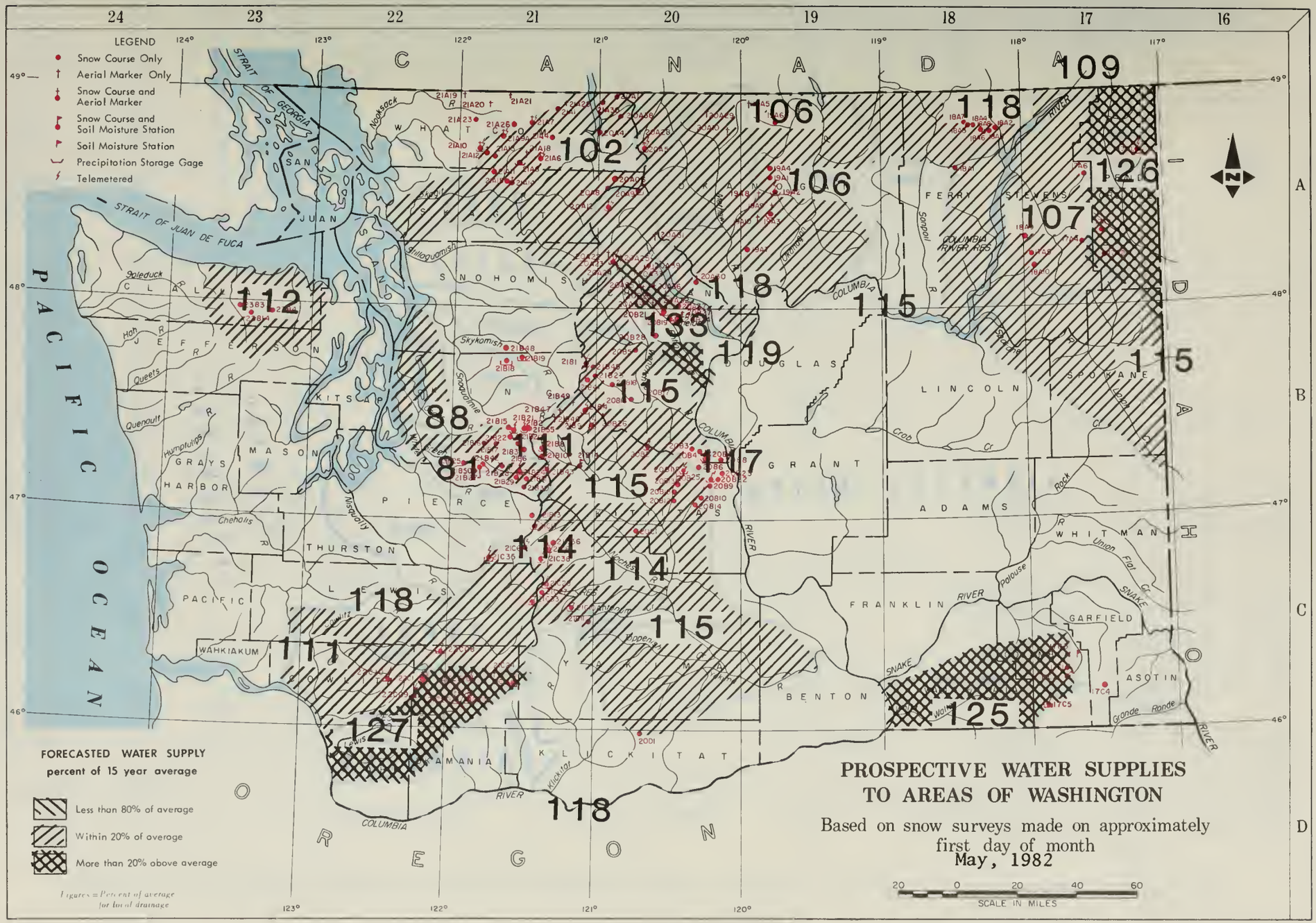
DONALD W. MOOS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor

DONALD R. EASTLUND, Hydrologic Technician
NORINE P. KENT, Statistical Assistant

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201


LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
FORECASTED WATER SUPPLY
percent of 15 year average
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
PROSPECTIVE WATER SUPPLIES
TO AREAS OF WASHINGTON
Based on snow surveys made on approximately first day of month
May, 1982
SCALE IN MILES
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF JUAN DE FUCA
STRAIT OF GEORGIA
COLUMBIA RIVER RES
109
118
106
102
106
126
107
112
118
115
133
119
115
115
88
111
81
117
115
114
114
118
115
111
127
125
118

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

UPPER COLUMBIA DRAINAGE

Pend Oreille River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bayer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970

Kettle River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snaw Caps Creek	18A5	3	38N	36E	2150
Snaw Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600

Colville River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Toga	18A10	6	29N	38E	3370

Sanpail River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sherman Creek Pass	18A1	19	36N	35E	5350

Okanagan River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salman Meadows	19A2SP	33	37N	24E	4500
Starvatian Mtn.	19A10a	15	35N	23E	6750
Tauts Caulee	19A6	30	39N	25E	2845

Methaw River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Harseshae Basin	19A5a	15	40N	23E	7000
Laup Laup	19A7	36	34N	23E	4650

Chelan Lake Basin

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Claudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbar	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirrar Lake	20A39	30	31N	18E	5600

Entiat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Blue Creek G.S.	20B28a	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pape Ridge	20B20	22	29N	18E	3540
Pape Ridge Snaw Pillaw	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35a	21	30N	17E	3910
Tammy Creek	20B21a	10	28N	18E	4900

Wenatchee River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenwarth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Trough #2	20B25SP	10	20N	20E	5310

Calockum Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Calackum Creek Upper	20B22	11	20N	20E	5300
Colackum Creek Lower	20B23	1	20N	20E	4300

Squilchuck Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beehive Springs	20B3	12	21N	19E	4400
Scaut-A-Vista	20B4	18	21N	20E	3400

Stemilt Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400

Yakima River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Baulder Creek	2189SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Calockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	2184SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grause Camp	20811SP	29	21N	19E	5385
High Creek	20812	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21B47a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Morse Lake	21C17SP	6	16N	11E	5400
Nanum	20813	4	20N	19E	3875
Trail Creek	20814	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20826a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21849a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500

LOWER COLUMBIA DRAINAGE

Asatin Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Spruce Springs	17C4	9	8N	40E	5700

Tauchet River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cause	17C3m	2	9N	40E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Touchet No. 2	17C5SP	6	7N	40E	5530

Klickitat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Satus Pass	20D1	21	6N	17E	4030

Lewis River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250

Cawlitz River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280

PUGET SOUND DRAINAGE

Nisqually River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Paradise Park (New)	21C35SP	13	15N	8E	5500

White River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Corral Pass	21B13SP	30	18N	11E	6000

Green River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Airstrip	21824P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21850	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Snowshoe Butte	21B43SP	14	20N	11E	5000
Stampede Pass	21B10SP	25	21N	11E	3860
Twin Camp	21B30	18	19N	11E	4100

Cedar River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21P	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16P	31	22N	9E	2500
Mt. Washington	21B15P	8	22N	9E	3000
Rex River	21817P	11	21N	9E	2400
Sauth Fork Cedar	2186P	24	21N	10E	3000
Tinkham Creek	21B20P	1	21N	10E	3400

Snaquolmie River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Alpine Meadaw	21848	31	27N	9E	3500
Olallie Meadows	21B2P	19	22N	11E	3625
South Fork Tolt	21B18P	26	26N	9E	1900
Olallie Meadaws East	21B55SP	20	22N	11E	8700

Skykomish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Lake Elizabeth	21B19P	33	26N	10E	2900

Skagit River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brown Tap	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadows (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadaws Cabins	20A8	29	36N	14E	1900
New Hazameen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200

Baker River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dack Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Racky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadaw	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watsan Lakes	21A8P	25	37N	9E	4500

Naokisack River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bald Mountain	21A19a	7	40N	7E	4400
Canyon	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panorama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200

OLYMPIC PENINSULA

Dungeness River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Park	23B4	1	28N	5W	5200

Morse Creek

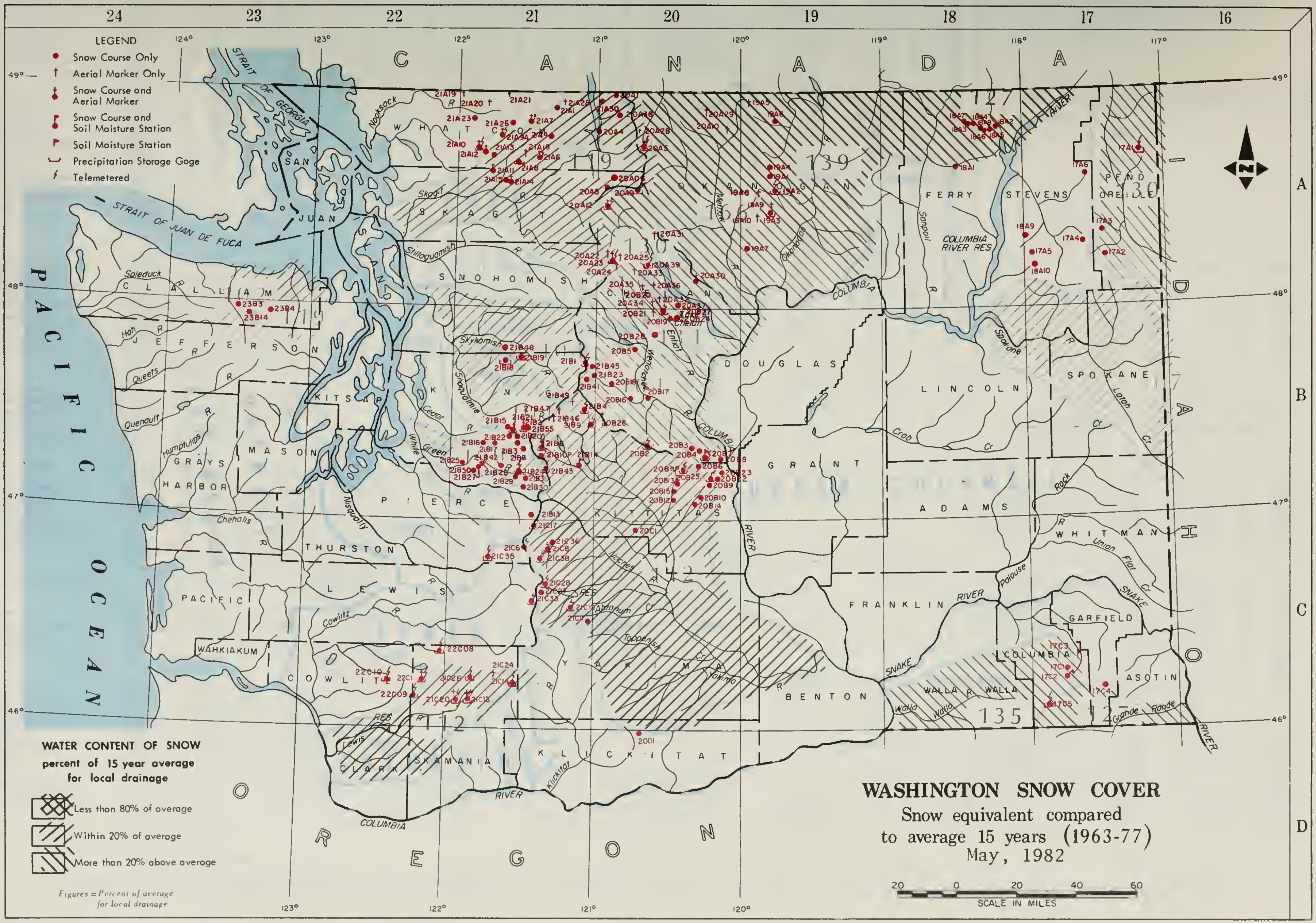
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cox Valley	23B14	31	29N	6W	4500

Elwha River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow


WASHINGTON SNOW COVER
Snow equivalent compared
to average 15 years (1963-77)
May, 1982
LEGEND
Snow Course Only
Aerial Marker Only
Snow Course and Aerial Marker
Snow Course and Soil Moisture Station
Soil Moisture Station
Precipitation Storage Gage
Telemetered
WATER CONTENT OF SNOW
percent of 15 year average
for local drainage
Less than 80% of average
Within 20% of average
More than 20% above average
Figures = Percent of average for local drainage
SCALE IN MILES
CANADA
IDAHO
OREGON
PACIFIC OCEAN
STRAIT OF GEORGIA
STRAIT OF JUAN DE FUCA
SAN JUAN
ISLAND
WHATCOM
SKAGIT
SNOHOMISH
OKANOGAN
FERRY
STEVENS
PEND OREILLE
CLALLAM
JEFFERSON
KITSAP
MASON
KING
CHELAN
DOUGLAS
LINCOLN
SPOKANE
GRAYS HARBOR
PIERCE
KITTITAS
GRANT
ADAMS
WHITMAN
THURSTON
PACIFIC
LEWIS
YAKIMA
FRANKLIN
GARFIELD
COLUMBIA
ASOTIN
WALLA WALLA
BENTON
WAHKIAKUM
COWLITZ
SKAMANIA
CLARK
KLICKITAT
COLUMBIA RIVER
SNAKE RIVER
COLUMBIA RIVER RES
139
127
130
119
166
110
112
135
125

INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Bayer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1SP	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970
Kettle River					
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Goat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Colville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370
Sanpoil River					
Sherman Creek Pass	18A1	19	36N	35E	5350
Okanagan River					
Clark	19ABa	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Muttan Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A2Ba	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2SP	33	37N	24E	4500
Starvation Mtn.	19A10a	15	35N	23E	6750
Tauts Caulee	19A6	30	39N	25E	2845
Methaw River					
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5SP	7	37N	18E	6500
Harseshae Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650
Chelan Lake Basin					
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23SP	18	31N	16E	5900
Park Creek Ridge	20A12SP	18	34N	16E	4600
Rainy Pass	20A9SP	21	35N	17E	4780
Safety Harbar	20A30a	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Mirrar Lake	20A39	30	31N	18E	5600
Entiat River					
Blue Creek G.S.	20B2Ba	19	28N	18E	5425
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4540
Entiat River Trail	20A34a	2	29N	17E	3325
Four Mile Ridge	20B27a	15	28N	19E	6800
Fox Camp	20A36a	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	3540
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	3540
Pugh Ridge	20A32a	34	30N	18E	6725
Shady Pass	20A37	20	29N	19E	6200
Snaw Brushy	20A35a	21	30N	17E	3910
Tommy Creek	20B21a	10	28N	18E	4900
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	3170
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2 SP	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenwarth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1SP	14	26N	13E	4070
Stevens Pass Sand Shed	21B45	12	26N	19E	3700
Trough #2	20B25SP	10	20N	20E	5310

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Colackum Creek					
Colockum Creek Upper	20B22	11	20N	20E	5300
Colockum Creek Lower	20B23	1	20N	20E	4300
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400
Stemilt Creek					
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7SP	30	21N	20E	4400
Yakima River					
Ahtanum R. S.	21C11	24	12N	14E	3100
Big Boulder Creek	21B9SP	35	23N	14E	3200
Bumping Lake	21C8P	23	16N	12E	3450
Bumping Lake New	21C36	13	16N	12E	3400
Bumping Ridge	21C38SP	9	15N	12E	4600
Colockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4SP	28	24N	14E	3371
Green Lake	21C10SP	3	12N	13E	6000
Grouse Camp	20B11SP	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Joe Lake	21B46a	22	23N	12E	4624
Lake Cle Elum	21B14M	15	20N	14E	2200
Lemah Creek	21B47a	7	23N	13E	3327
Manastash	20C1	24	17N	16E	3935
Morse Lake	21C17SP	6	16N	11E	5400
Nonum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8P	13	21N	11E	2450
Van Epps Pass	20B26a	16	23N	15E	5925
Walters Flat	20B15	22	20N	19E	3360
Waptus Lake	21B49a	12	23N	13E	3024
White Pass (East Side)	21C28SP	2	13N	11E	4500
LOWER COLUMBIA DRAINAGE					
Asatin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Touchet River					
Couse	17C3m	2	9N	40E	3370
Hamestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Tauchet No. 2	17C5SP	6	7N	40E	5530
Klickitat River					
Satus Pass	20D1	21	6N	17E	4030

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Lewis River					
June Lake	22C09SP	26	8N	5E	3200
Lane Pine Shelter	21C26SP	8	9N	7E	3800
Plains of Abraham	22C1SP	35	9N	5E	4400
Spencer Meadow	21C20SP	16	8N	7E	3400
Surprise Lakes	21C13SP	14	7N	8E	4250
Cawlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Pigtail Peak	21C33SP	11	13N	11E	5900
Potato Hill	21C14SP	36	10N	10E	4500
Sheep Canyon	22C10SP	12	8N	4E	4050
Strawberry	22C08SP	9	10N	6E	3280
PUGET SOUND DRAINAGE					
Nisqually River					
Paradise Park (New)	21C35 SP	13	15N	8E	5500
White River					
Carral Pass	21B13 SP	30	18N	11E	6000
Green River					
Airstrip	21B24P	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	22	20N	8E	4000
Sawmill Ridge	21831	5	19N	11E	4700
Snawshoe Butte	21843SP	14	20N	11E	5000
Stampede Pass	21810 SP	25	21N	11E	3860
Twin Camp	21830	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21821P	30	22N	10E	3300
Mt. Gardner Aux.	21822	31	22N	10E	2500
Mt. Lindsay	21816P	31	22N	9E	2500
Mt. Washington	21815P	8	22N	9E	3000
Rex River	21817P	11	21N	9E	2400
South Fark Cedar	21B6P	24	21N	10E	3000
Tinkham Creek	21820P	1	21N	10E	3400
Snoqualmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Olallie Meadows	2182P	19	22N	11E	3625
South Fork Talt	21818P	26	26N	9E	1900
Olallie Meadaws East	21B55SP	20	22N	11E	8700
Skykomish River					
Lake Elizabeth	21B19P	33	26N	10E	2900

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Brawn Top	21A28a	26	40N	12E	6000
Devils Park	20A4	34	38N	16E	5900
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeaut Meadaws (New)	20A38	8	40N	16E	5000
Granite Creek	20A06	25	36N	16E	3500
Meadaws Cabins	20A8	29	36N	14E	1900
New Hozomeen Lake	21A30	19	40N	14E	2800
Thunder Basin	20A07	10	35N	14E	4200
Baker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Maunt Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12AP	20	37N	8E	2100
Schreibers Meadow	21A10AP	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8P	25	37N	9E	4500
Naak'sack River					
Bald Mountain	21A19a	7	40N	7E	4400
Canyan	21A20A	20	40N	8E	5100
Glacier Creek	21A23	9-10	38N	7E	3700
Panorama New	21A26	17	39N	9E	4300
Twin Lakes	21A21a	16	40N	9E	5200
OLYMPIC PENINSULA					
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Marse Creek					
Cax Valley	23B14	31	29N	6W	4500
Elwha River					
Hurricane	23B3	36	29N	7W	4500

LEGEND

21A7	Snow Course Only
21A7a	Aerial Marker Only
21A7A	Snow Course And Aerial Marker
21A7M	Snow Course And Soil Moisture Station
21A7m	Soil Moisture Station
21A7P	Snow Course And Precipitation Storage Gage
21A7p	Precipitation Storage Gage
21A7SP	Snow Pillow

WATER SUPPLY OUTLOOK

State of Washington

May 1, 1982

The heavy storms that occurred around the first of April turned the month into a cold one. Above normal snowfall and valley precipitation fell in the northeastern portion of the state, in the Blue Mountains, and on the Southwest Slope Cascades. The rest of the state experienced a drying trend with the least amount, percentagewise, occurring in the North Central or Okanogan drainage division. The water supply outlook has not changed appreciably from that reported last month. Percentage comparisons show a general improvement in the amount of water left in the hills to run off during the remainder of the water use season. All basins are expected to have above normal outflows except on the west side of the Cascades. The forecast range for the May through September water use season is from 81 to 133 percent of normal.

SNOW COVER

The comparisons of mountain snowcover after the April 1 measurements are not too indicative of current conditions. The lower elevation snow courses are generally bare by May 1; yet in cold years, such as 1982, a snow flurry can make a considerable difference in the basin statistics. This happened at several snow courses as of May 1. Discounting this phenomenon, the comparison of May 1 snow water equivalents with the last couple of years and the 1963-77 average is as follows: Pend Oreille, measured by 14 snow courses, has a snowpack that is 286 percent greater than last year's measurement; 162 percent greater than occurred in 1980; and 30 percent greater than normal. The Okanogan, measured by 36 snow courses, has a snowpack 176 percent above last year and 39 percent above normal. The average for all measurements in the Upper Columbia Basin reported herein is 197 percent greater than last year, 168 percent greater than that which occurred in 1980, and 34 percent above normal. The mean snowcover of the seven snow courses in the Lower Columbia Basin, as reported herein, is 732 percent greater then last year; 134 percent above 1980; and 20 percent greater than average. Along the east slope of the Cascades, the snowcover is 275 percent greater than last year; 123 percent greater than 1981; but only 9 percent above normal. Along the north side of the Olympics, the snowcover is 430 percent greater than last year; 128 percent greater than that which occurred in 1980; and 15 percent greater than the 1963-77 average.

RESERVOIRS

The reservoirs are all under close management. Those with flood control space have been emptied to take the spring flows and the irrigation reservoirs are filling under management control. It is anticipated that all reservoirs will fill with the spring runoff, including Lake Cle Elum which had been drawn down for fish releases. The use of reservoired water is dependent to a great extent upon the subsequent climatical conditions in the area of water use. Wet weather reduces the call for irrigation water, while a hot, dry summer would increase this use. Under normal conditions, there is adequate water for all uses and even a good carry over into the next winter's storage season.

PRECIPITATION

The May report starts a new rainfall picture. We are into the spring season and so the rainfall that occurred during the month of April stands alone. We have had a variety of rainfall, as reported by the National Weather Service. Eastern Washington has generally been wet, while the Cascades generally have experienced subnormal rainfall this past month. In the Columbia drainage division above Castlegar, precipitation has only been 69 percent of normal; while the Pend Oreille, Northeastern Washington, and Souteastern Washington have had well above normal rainfall--82 percent above, 22 percent above, and 20 percent above, respectively. The other drainage division that had above normal rainfall was Southeast Slope Cascades, it having a 13 percent above normal rainfall during the month of April. The Okanogan, or North Central drainage division, was the really dry one this month, only 47 percent of normal precipitation occurred. The East Slope Cascades and the Northwest Slope Cascades both had rainfall that was only in the 80 percent of normal category.

STREAMFLOW

Runoff in the State of Washington was generally below normal except for some low elevation watersheds in the eastern portion of the state. Along the mainstem, good flows have been experienced with the Columbia, as measured at The Dalles, having an outflow 8 percent above normal. The high points were the Palouse, as measured near Hooper, and Walla Walla at Touchet, both with 51 percent above normal runoff. On the other side, the Similkameen River out of Canada had a flow only 59 percent of normal. Forecasts in Washington range from a low of approximately 20 percent below normal on certain Puget Sound drainage watersheds to a high of 25 percent above normal for some watersheds flowing from Western Montana and out of the Blue Mountains. This is not dramatically different from that reported last month. There is a slight improvement in the water supply as a result of the below normal runoff and the cold temperatures which have delayed snowmelt. This is reflected in the increased snowcover, percentagewise, measured as of May 1. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - May, 1982

he following summarized runoff forecasts are based primcipally on mountain snow-over and on the assumption that precipitation and temperature will be near average rom the present time to the end of the forecast period. Appreciable deviations rom normal of temperature and/or precipitation will correspondingly modify these orecasts. These forecasts are made as a product of the cooperative efforts of the oil Conservation Service and the National Weather Service. Streamflow figures for 981 are preliminary and subject to revision.

asin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-feet % 15-yr. Avg.	Fore-cast period	1981	1980	1979	15-yr. Average 63-77
		COLUMBIA BASIN					
OLUMBIA RIVER SYSTEM							
olumbia River	46700	109	May-Sept	45265	35923	32506	42781
at Birchbank 1/	36650	109	May-July	35235	29192	25203	33630
	25600	109	May-June	23736	22730	17683	23469
olumbia River	70900	115	May-Sept	63703	52308	47880	61521
at Grand Coulee 1/	58130	115	May-July	51925	43612	39207	50545
	43440	115	May-June	37635	35163	30248	37775
olumbia River	78600	117	May-Sept	69986	56911	50210	67032
bl. Priest Rapids 1/	65010	117	May-July	57367	48166	41612	55565
	48670	117	May-June	42026	39066	32364	41600
olumbia River	107000	118	May-Sept	85504	78563	66834	90972
at The Dalles, OR 1/	89700	118	May-July	70678	65325	55749	75997
	69300	118	May-June	53611	53710	45007	58714
END OREILLE RIVER SYSTEM							
end Oreille River	17200	126	May-Sept	12043	11197	10206	13596
bl. Box Canyon	15300	125	May-July	11326	10042	9662	12287
	12900	126	May-June	9741	8702	8783	10230
ETTLE RIVER SYSTEM							
ettle River	1900	118	May-Sept	1937	1422	1133	1615
nr. Laurier	1780	117	May-July	1795	1334	1090	1523
	1580	116	May-June	1467	1190	1007	1357
olville River	90	107	May-Sept		76	43	84
at Kettle Falls	80	110	May-July		66	38	73
	70	108	May-June		57	35	65

/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Fore-cast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr Averag 63-77
SPOKANE RIVER SYSTEM							
Spokane River **	2360	115	May-Sept	1557	1675	1924	2102
at Post Falls, ID 2/	2260	115	May-July	1464	1507	1872	1966
	2110	115	May-June	1279	1365	1793	1833
OKANOGAN RIVER SYSTEM							
Similkameen River	1520	106	May-Sept	1143	1340	811	1439
nr. Nighthawk	1400	105	May-July	1020	1251	751	1339
	1180	106	May-June	832	1108	667	1114
Okanogan River	1690	106	May-Sept		1418	840	1593
nr. Tonasket	1550	108	May-July	1268	1290	756	1439
	1300	110	May-June	995	1107	662	1179
METHOW RIVER SYSTEM							
Methow River	1110	118	May-Sept		915	441	938
nr. Pateros	1800	116	May-July		854	395	863
	820	114	May-June		750	345	717
CHELAN RIVER SYSTEM							
Chelan River	1350	119	May-Sept	807	933	675	1139
at Chelan 3/	1180	120	May-July	702	833	584	982
	890	121	May-June	537	672	475	736
Stehekin River	970	118	May-Sept		643	511	823
at Stehekin	820	120	May-July		547	422	683
	610	123	May-June		425	332	497
Entiat	300	133	May-Sept		187	124	227
nr. Ardenvoir	275	135	May-July		171	110	204
	225	142	May-June		143	94	159
WENATCHEE RIVER SYSTEM							
Wenatchee River	1350	115	May-Sept			785	1172
at Plain	1160	112	May-July			704	1032
	875	112	May-June			596	778
Wenatchee River	1850	116	May-Sept	1047	1201	1024	1594
at Peshastin	1610	114	May-July	946	1087	932	1413
	1215	113	May-June	754	893	796	1077
Stemilt Basin	135*	98	May-Sept				138
nr. Wenatchee							
Icicle Creek	395	106	Apr-Sept				371
nr. Leavenworth	360	105	Apr-July				342
	295	106	Apr-June				279

2/ Observed flow corrected for storage in Coeue d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.
3/ Observed flow corrected for storage in Lake Chelan.
* Thousands of Miners' Inches
** Forecasts made by Gerald A. Beard, Soil Conservation Service, Boise, Idaho.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet % 15-yr. Avg.	Fore-cast period	1981	1980	1979	15-yr. Average 63-77
YAKIMA RIVER SYSTEM							
Yakima River	135	111	May-Sept	68	78	99	122
nr. Martin 4/	125	114	May-July	56	66	89	110
	100	110	May-June	46	58	77	91
Yakima River	950	115	May-Sept	537	552	574	827
at Cle Elum 5/	845	115	May-July	480	476	543	735
	695	115	May-June	400	406	459	603
Yakima River	2080	115	May-Sept	922	1235	1115	1815
nr. Parker 6/	1850	115	May-July	787	1134	1014	1601
	1540	115	May-June	688	1011	906	1340
Kachess River	125	119	May-Sept	56	77	76	105
nr. Easton 7/	115	117	May-July	48	70	70	98
	95	116	May-June	42	57	63	82
Cle Elum River	500	118	May-Sept	252		295	423
nr. Roslyn 8/	440	116	May-July	221	252	273	379
	350	116	May-June	183	216	239	302
Bumping River	150	114	May-Sept	64	101	90	132
nr. Nile 9/	130	109	May-July	56	92	83	119
	100	108	May-June	48	83	73	93
American River	125	110	May-Sept		95	71	114
nr. Nile	115	112	May-July		88	64	103
	90	110	May-June		79	56	82
Tieton River	255	114	May-Sept	122	176	159	223
at Tieton Dam 10/	210	115	May-July	105	144	128	183
	160	115	May-June	82	118	100	139
Naches River	880	114	May-Sept	332	514	492	771
nr. Naches 11/	775	114	May-July	292	479	446	683
	640	115	May-June	251	422	395	555
Ahtanum Creek	40	103	May-Sept				39
nr. Tampico 12/	35	100	May-July				35
	30	103	May-June				29

/ Observed flow corrected for storage in Lake Keechelus.
/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.
/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.
/ Observed flow corrected for storage in Lake Kachess.
/ Observed flow corrected for storage in Lake Cle Elum.
/ Observed flow corrected for storage in Bumping Lake
9/ Observed flow corrected for storage in Rimrock Lake.
/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.
2/ Observed flow of North and South Forks (Combined).

Basin, Stream and Station	Forecast Runoff 1982	% 15-yr. Avg.	Forecast period	Seasonal Streamflow in Thousands of Acre-Feet 1981	1980	1979	15-yr Averag 63-77
LOWER COLUMBIA RIVER SYSTEM							
Mill Creek	9.6	125	May-Sept			9.08	7.70
nr. Walla Walla	9.4	125	May-July			8.96	7.50
	9.1	125	May-June			8.85	7.30
Lewis River	1220	127	May-Sept	729		671	958
at Ariel 13/	985	125	May-July	604		539	788
	800	123	May-June	498		459	652
Cowlitz River	2030	118	May-Sept			1205	1718
bl. Mayfield Dam	1660	115	May-July			1010	1446
	1300	114	May-June			846	1145
Cowlitz River	2410	111	May-Sept	1628		1522	2169
at Castle Rock 14/	1985	110	May-July	1363		1051	1432
	1575	110	May-June	1113		1051	1432
OLYMPIC PENINSULA							
DUNGENESS RIVER SYSTEM							
Dungeness River	160	112	May-Sept			96	143
nr. Sequim	130	115	May-July			77	113
	90	114	May-June			58	79
ELWHA RIVER SYSTEM							
Elwha River	540	112	May-Sept			349	480
nr. Port Angeles	430	113	May-July			276	381
PUGET SOUND							
SKAGIT RIVER SYSTEM							
Skagit River	1910	95	May-Aug			1352	2017
at Newhalem 15/	2200	102	May-Sept			1477	2161
	1780	100	May-July			1188	1776
	1270	98	May-June			932	1290
GREEN RIVER SYSTEM							
Green River	190	81	May-Sept			145	233
bl. Howard Hanson Dam 16/	160	80	May-July			126	201
	140	81	May-June			112	173
CEDAR RIVER SYSTEM							
Cedar River	65	88	May-Sept			51	74
nr. Cedar Falls	60	92	May-July			46	65
	50	93	May-June			40	54

13/ Observed flow corrected for storage in Lake Merwin, Yale, and Swift Reservoirs.
14/ Observed flow corrected for storage in Mayfield Reservoir.
15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.
16/ Observed flow corrected for storage in Howard Hanson Dam.

RESERVOIR STORAGE - 1000 Acre Feet

ASIN / TREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured May 1 1982	1981	1980	Normal*
		COLUMBIA				
pokane	Coeur d'Alene Lake	225.1	247.5	248.0	264.5	238.4
olumbia	Franklin D. Roosevelt Lake	5232.0	412.9	3198.4	2460.0	867.8
olumbia	Banks Lake	714.9	618.7	642.7	527.9	442.8
kanogan	Conconully Reservoir	13.0	11.6	9.1	6.5	7.7
kanogan	Conconully Lake	10.5	10.2	10.0	9.0	8.0
helan	Lake Chelan	676.1	201.8	224.9	214.4	219.0
		YAKIMA				
akima	Keechelus Lake	157.8	152.8	159.6	131.5	113.8
achess	Kachess Lake	239.0	221.2	240.3	126.7	194.2
le Elum	Lake Cle Elum	436.9	184.4	365.1	378.0	295.9
umping	Bumping Lake	33.7	7.5	34.3	34.4	11.6
ieton	Rimrock Lake	198.0	178.0	198.3	144.0	136.6
		PUGET SOUND				
kagit	Ross Reservoir	1404.1	632.1	1086.3	644.0	711.5
kagit	Diablo Reservoir	90.6	87.2	87.9	84.1	86.4
kagit	Gorge Reservoir	9.8	8.0	7.9	7.5	8.1

/ Based on Active Storage

15-yr. Average 1963-1977

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about May 1, 1982, as percent of the same date in 1981 and 1980 and average of record.

Tributary Basin	No. of Courses Average	1982 Snow Water Expressed as percent of 1981	1980	1963-77 Avg.
UPPER COLUMBIA BASIN				
Pend Oreille	14	386	262	130
Kettle	10	187	262	127
Spokane	7	305	256	107
Okanogan	36	276	354	139
Methow	6	318	481	166
Chelan	2	143	155	130
Entiat	9	239	223	131
Wenatchee	9	529	232	164
Yakima	16	287	190	112
LOWER COLUMBIA BASIN				
Asotin	1	383	214	127
Mill Creek	1	306	306	135
Lewis	3	1806	274	112
Cowlitz	2	-	144	104
PUGET SOUND				
White	3	232	162	113
Green	3	288	309	109
Snoqualmie	1	437	202	101
Skykomish	2	586	172	104
Skagit	15	332	269	119
OLYMPIC PENINSULA				
Morse Creek	1	368	199	123
Elwha	1	442	284	102
Dungeness	1	781	202	119

PRECIPITATION 1/
Division Average Observations and Departures

Drainage Divisions	FALL Sept-Oct 1981 2/ Observed	Departure	WINTER Nov 1981 - Mar 1982 Observed	Departure	SPRING April 1982 Observed	Departure
Columbia in Canada	5.17	+0.15	17.05	+1.54	1.19	-0.52
Pend Oreille - Spokane	3.56	-0.48	19.70	+2.15	3.31	+1.49
Northeastern Washington	3.28	+0.80	10.12	+0.72	1.54	+0.28
Southeastern Washington	3.03	+0.52	12.95	+2.52	1.84	+0.31
Central Washington	4.87	+0.12	32.22	+4.69	1.83	-0.36
North Central Washington	2.61	+1.02	7.28	+0.74	0.40	-0.45
Northwest Slope Cascades	13.88	+0.67	59.27	+3.88	5.46	-1.18
Southwest Slope Cascades	9.98	+1.30	45.31	+3.67	5.22	+0.60

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages.

Central Washington - Yakima, Wenatchee, and Chelan Drainages.

North Central Washington - Methow and Okanogan Drainages.

Northwest Slope Cascades - Puget Sound Drainages.

Southwest Slope Cascades - Lower Columbia Drainages.

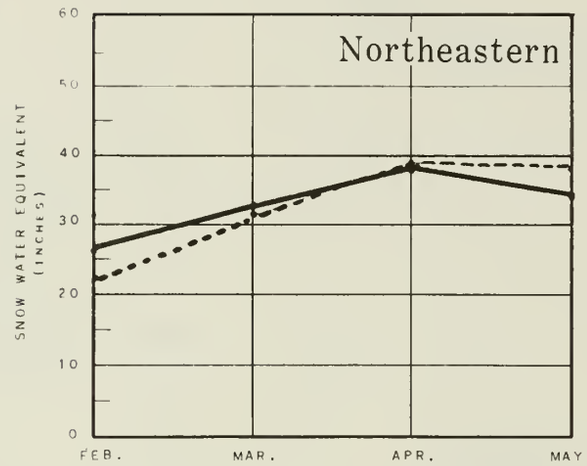
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

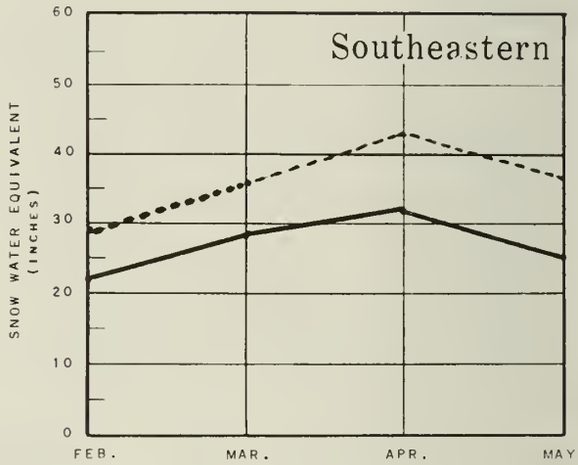
2/ - Departure from 15-year (1958-72) drainage division average.

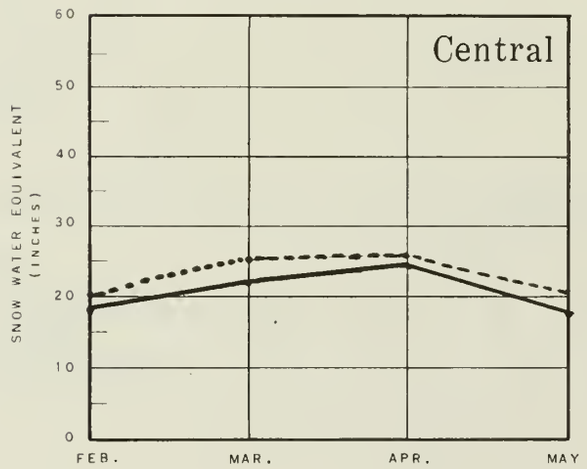
WASHINGTON SNOW COVER

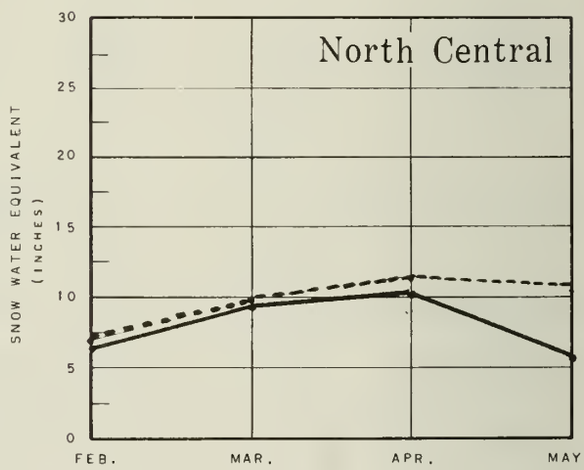
1982

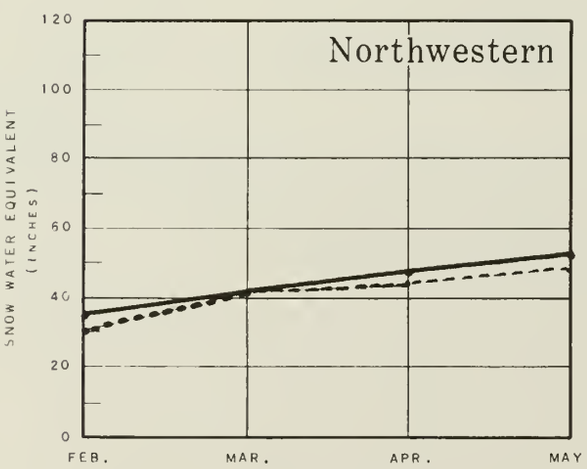
DRAINAGE AREAS

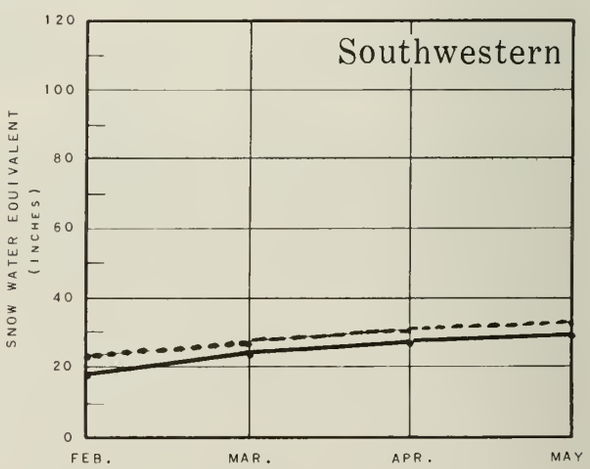












Average ——
1982 - - - - -

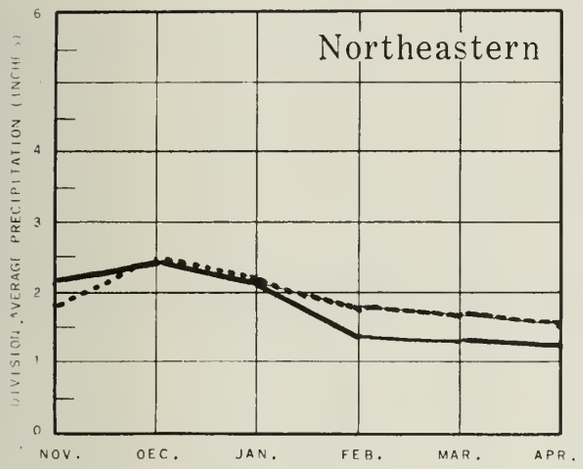
Selected Snow Survey Courses by Soil Conservation Service

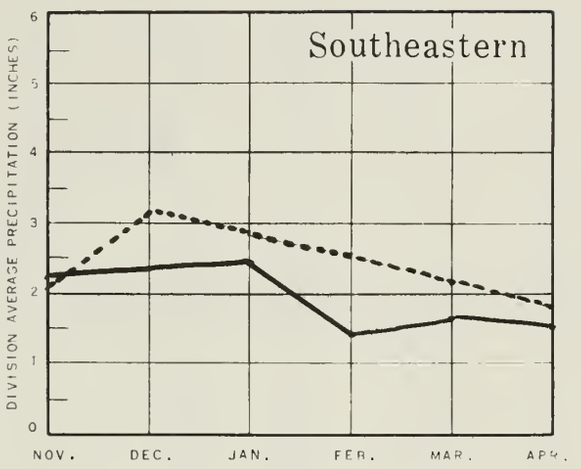
M7-L-22028G

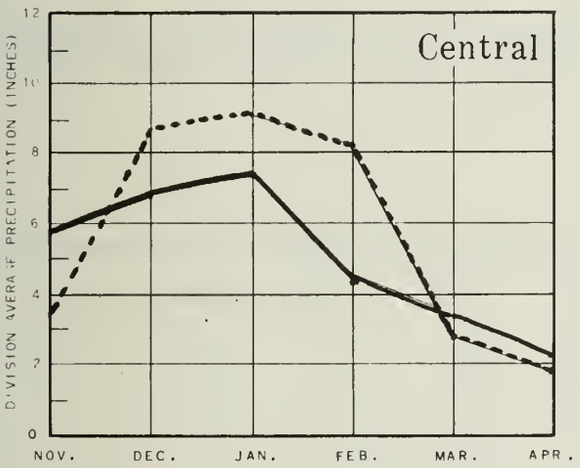
WASHINGTON VALLEY PRECIPITATION

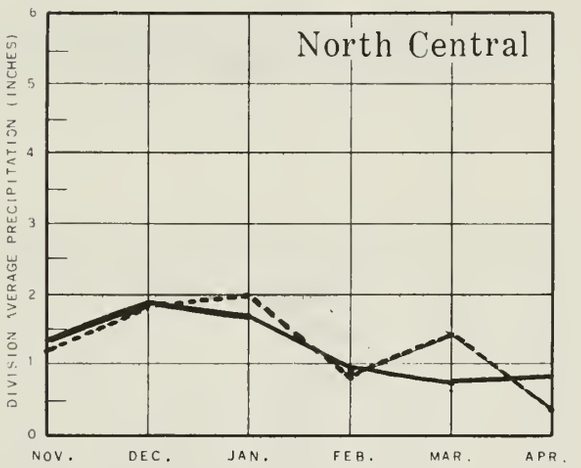
1982

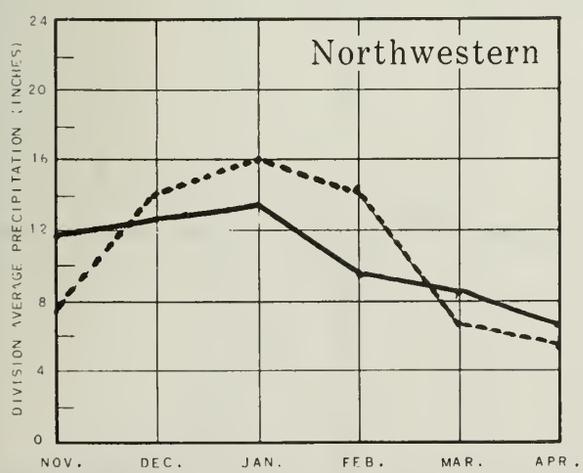
DRAINAGE AREAS

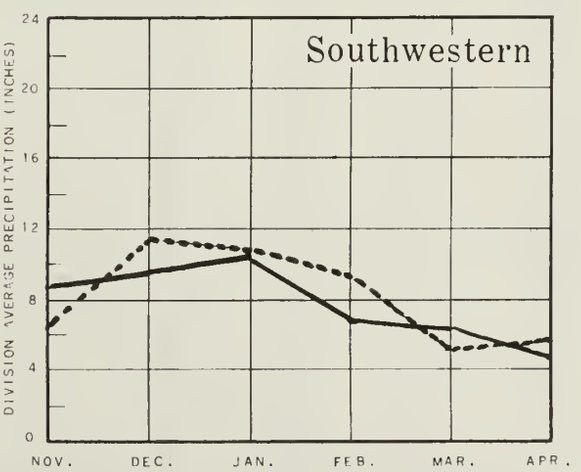






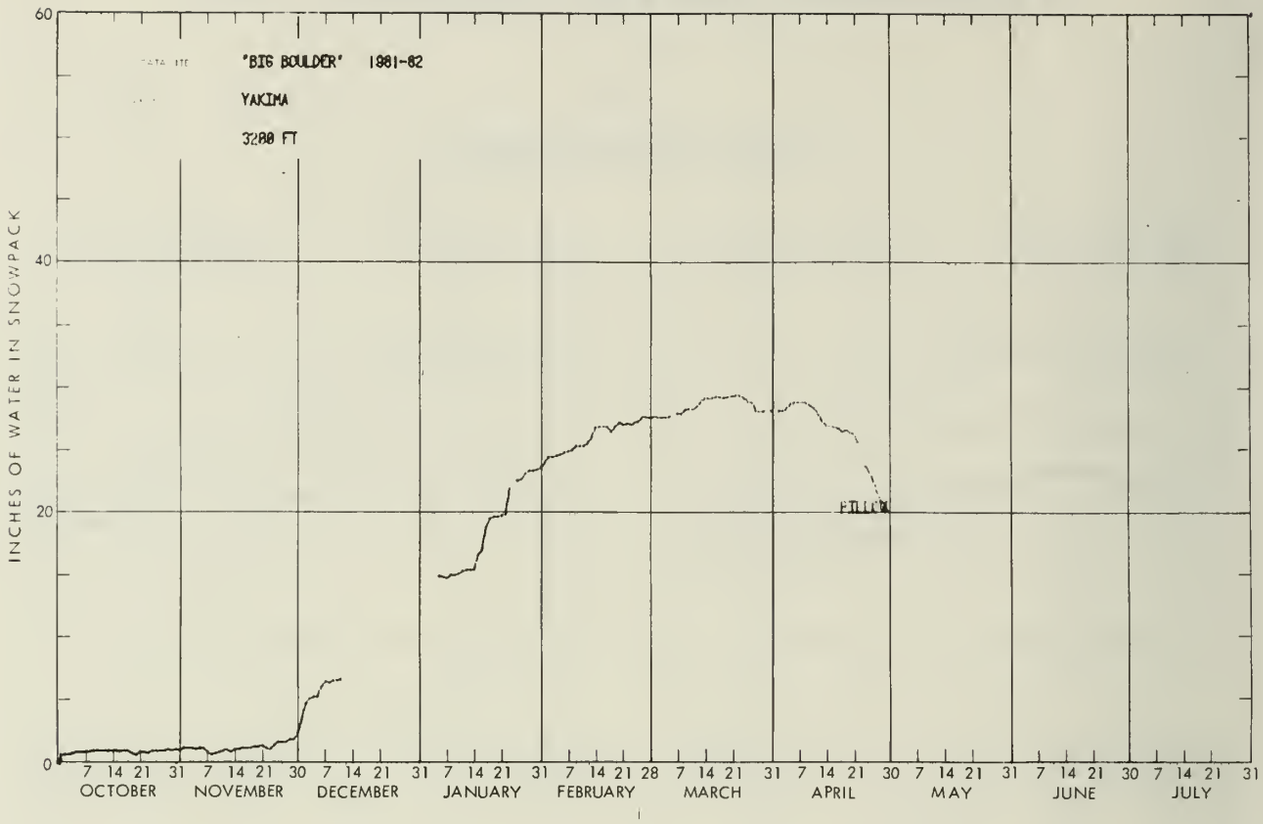


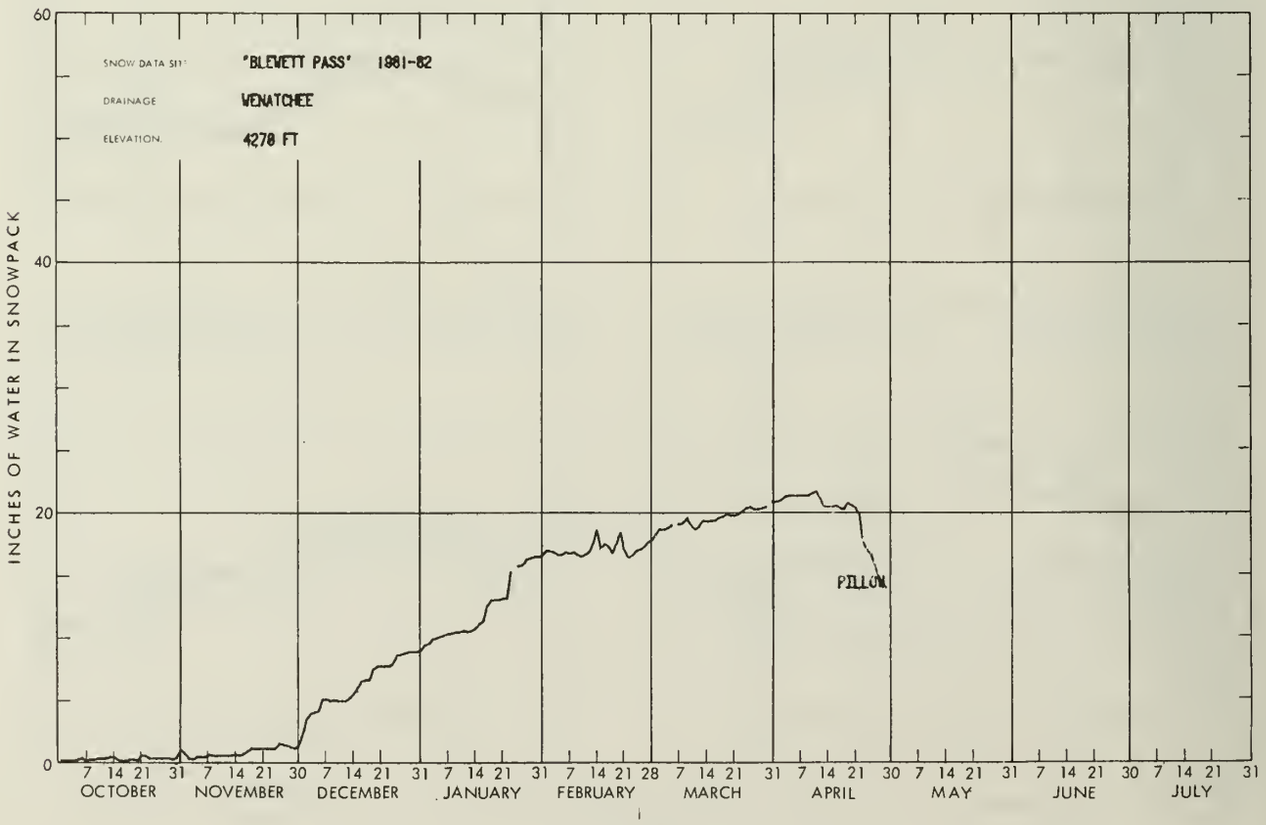


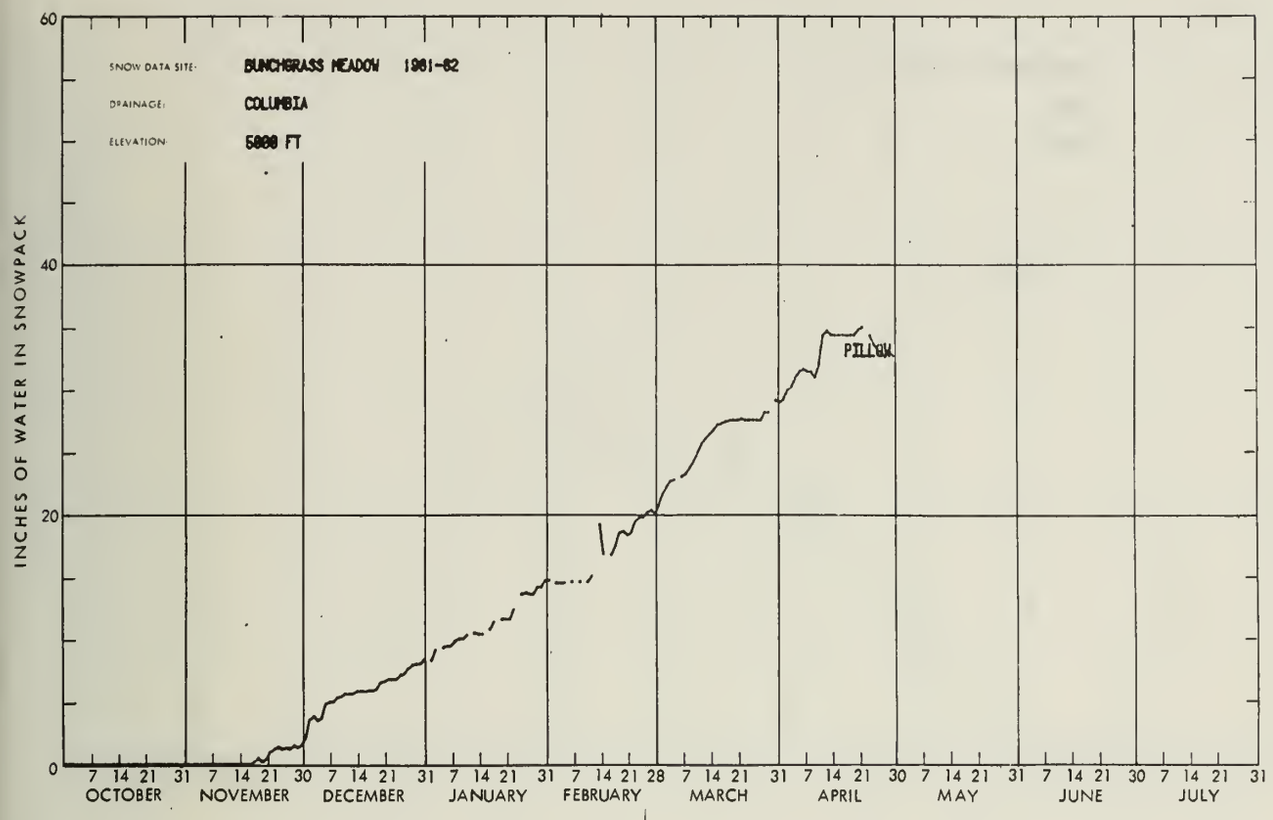


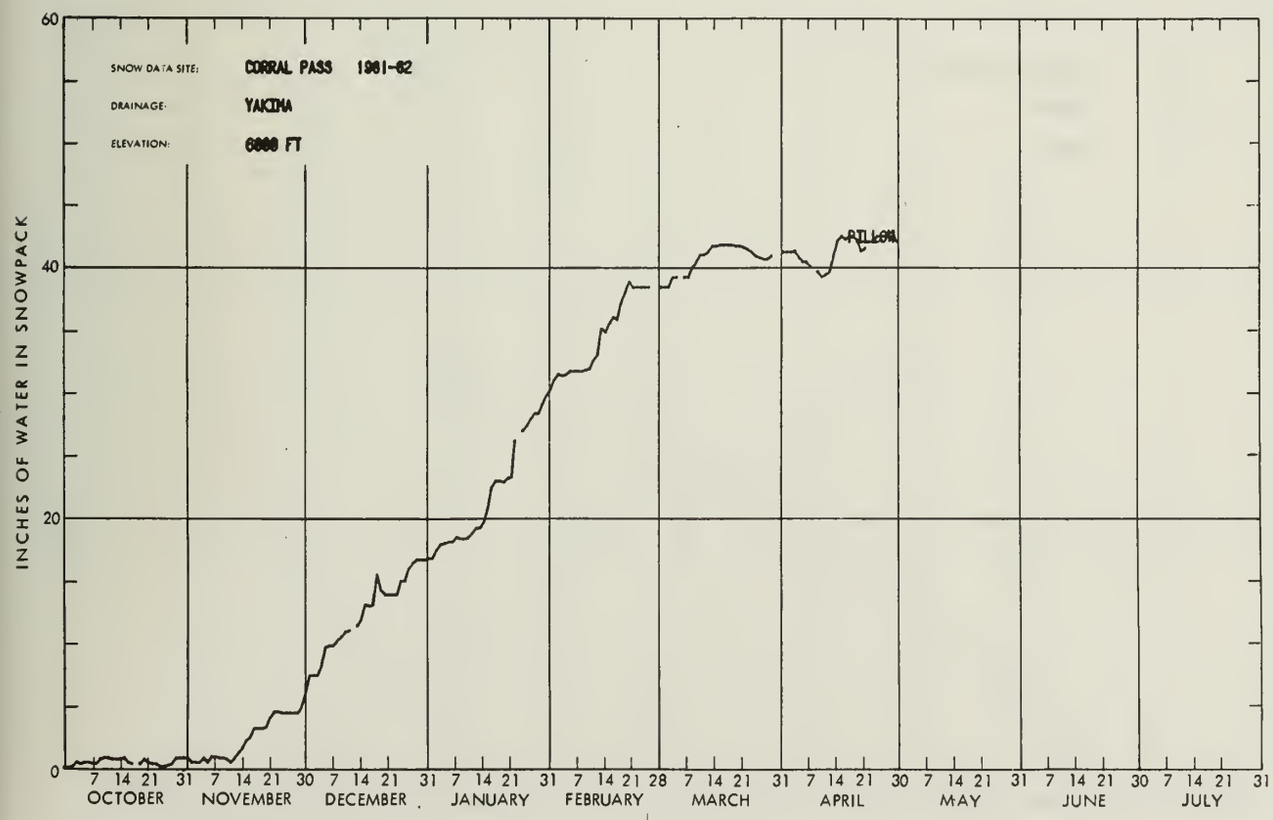
Average: ——————
1982 : - - - - - - - -

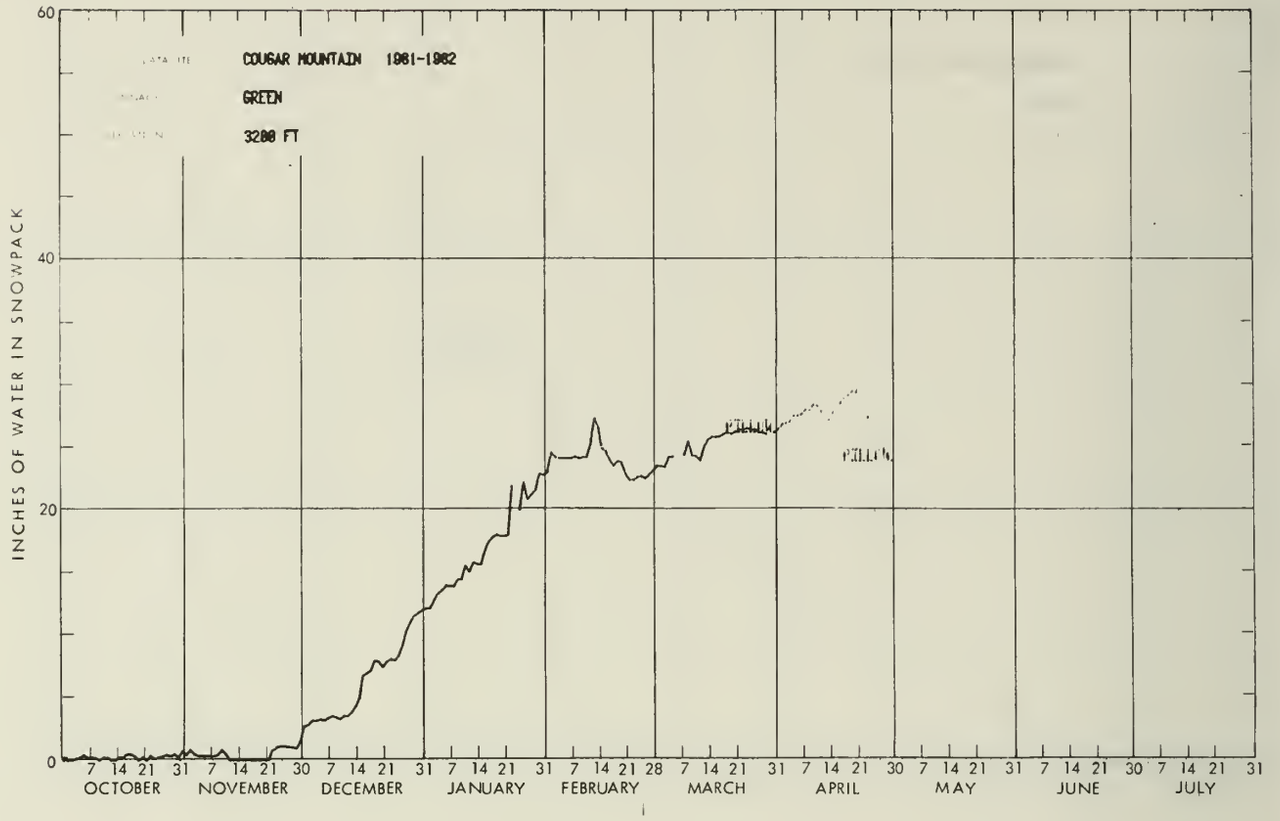
Preliminary Analysis by National Weather Service

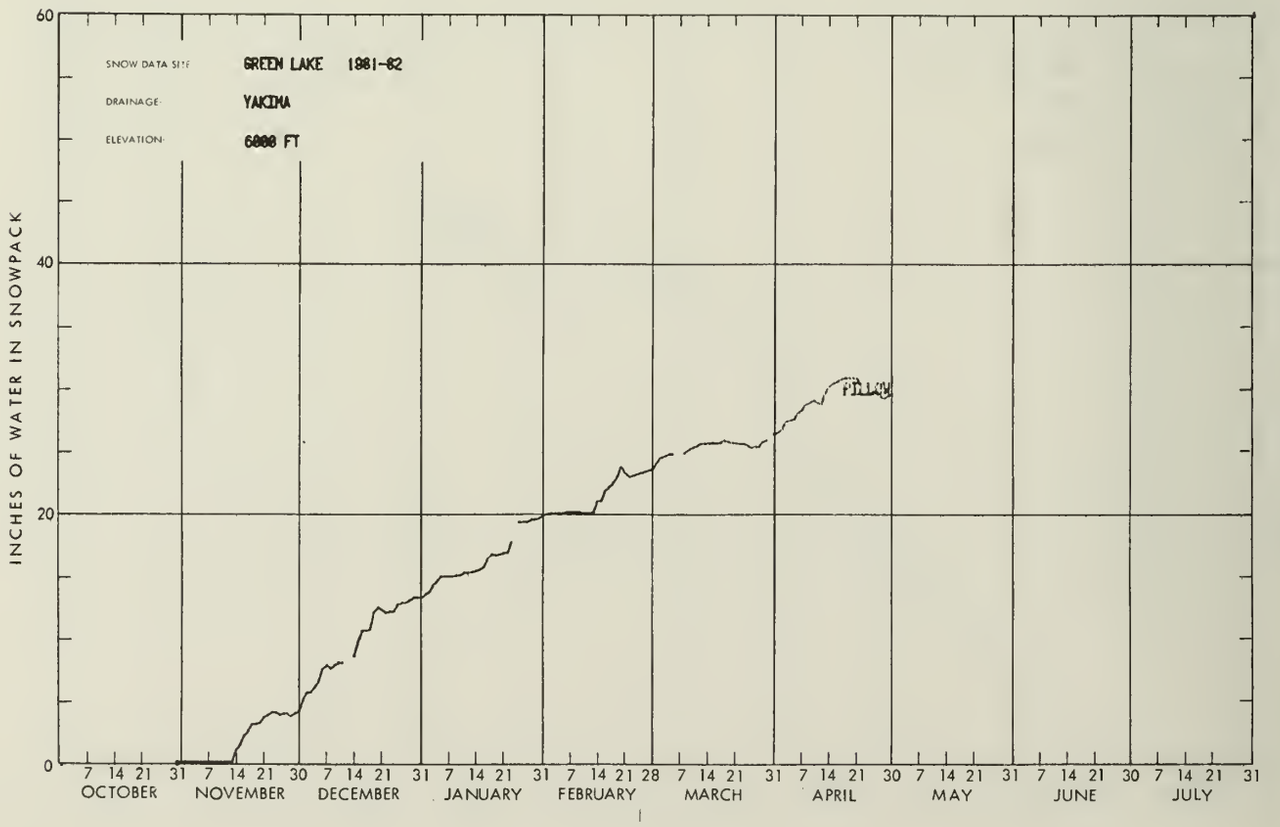

SNOW DATA SITE
"BIG BOULDER" 1981-82
YAKIMA
3200 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
"BLEWETT PASS" 1981-82
DRAINAGE
WENATCHEE
ELEVATION
4270 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: BUNCHGRASS MEADOW 1981-82
DRAINAGE: COLUMBIA
ELEVATION: 5000 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: CORRAL PASS 1981-82
DRAINAGE: YAKIMA
ELEVATION: 6000 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


COUGAR MOUNTAIN 1981-1982
GREEN
3200 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE GREEN LAKE 1981-82
DRAINAGE YAKIMA
ELEVATION 6000 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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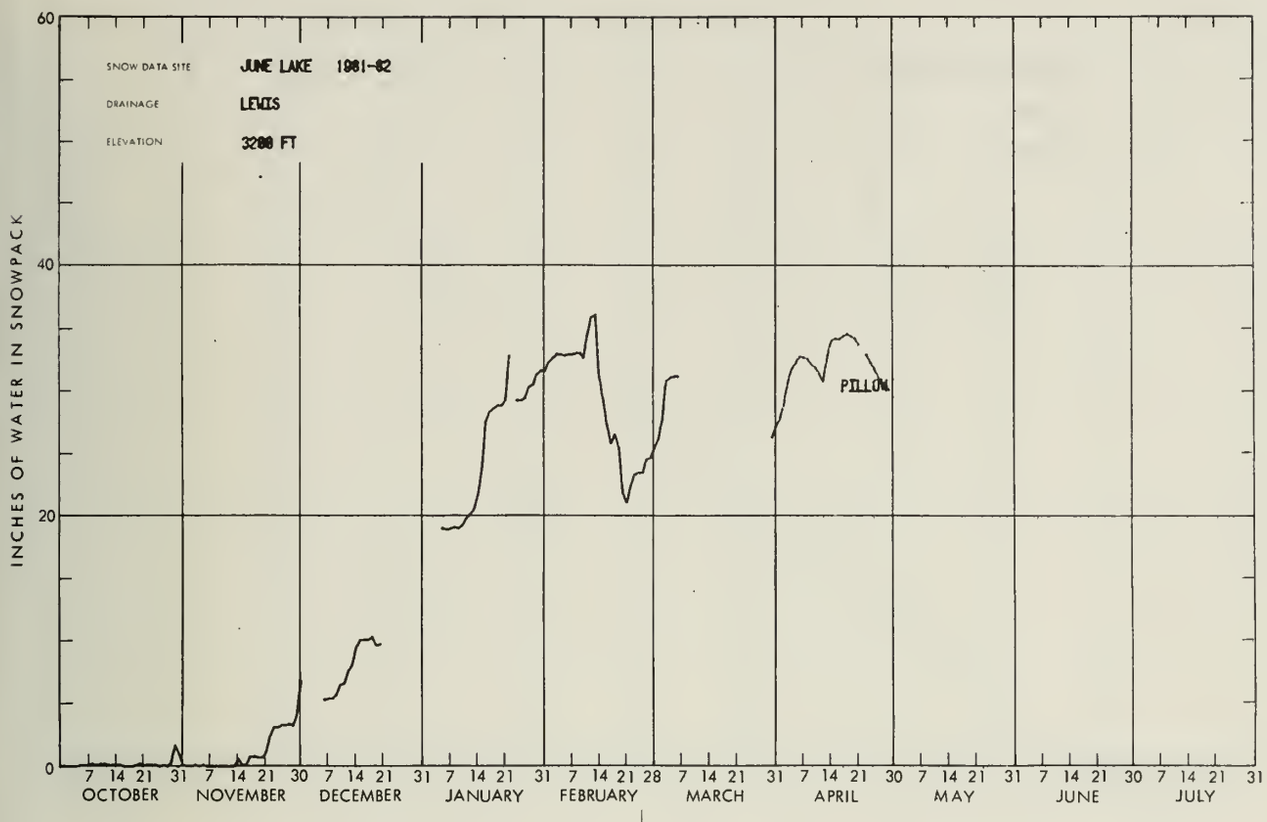
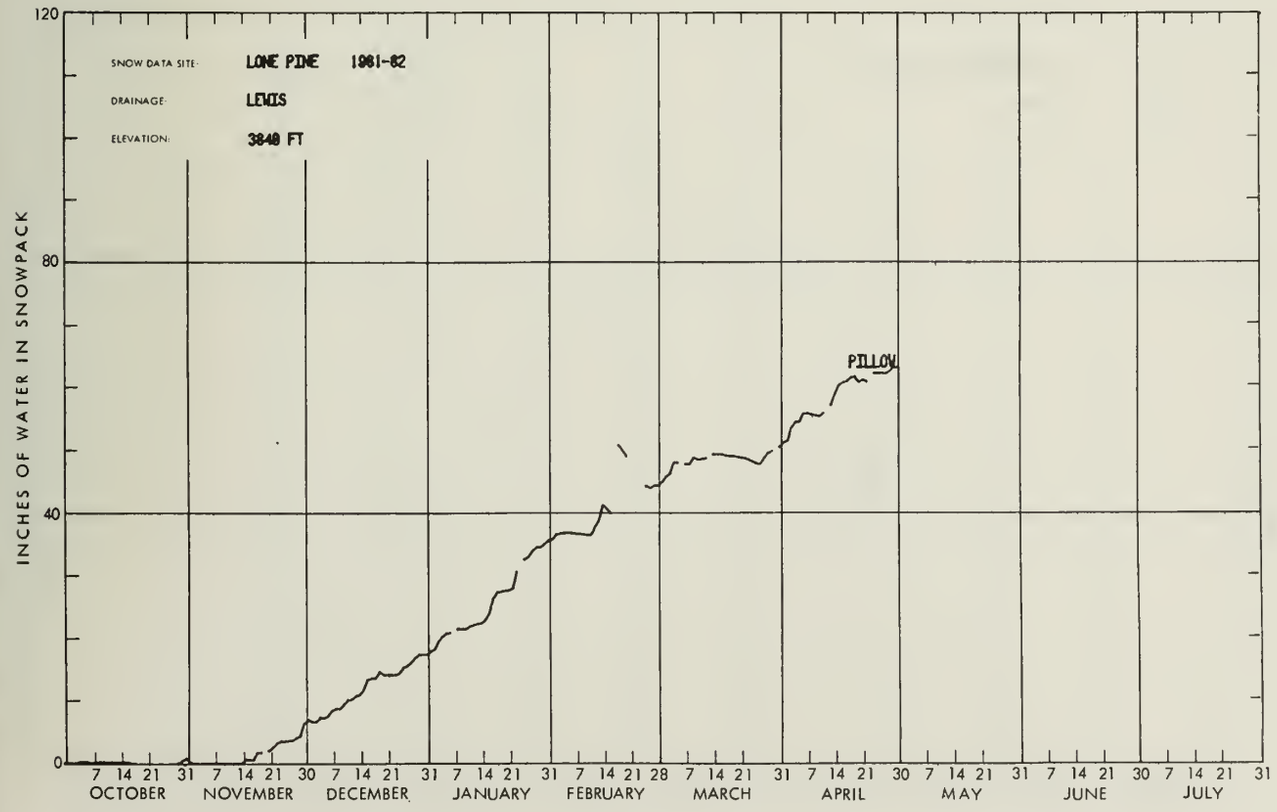

SNOW DATA SITE JUNE LAKE 1981-82
DRAINAGE LEWIS
ELEVATION 3200 FT
INCHES OF WATER IN SNOWPACK
0
20
40
60
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE LONE PINE 1981-82
DRAINAGE LEWIS
ELEVATION 3840 FT
INCHES OF WATER IN SNOWPACK
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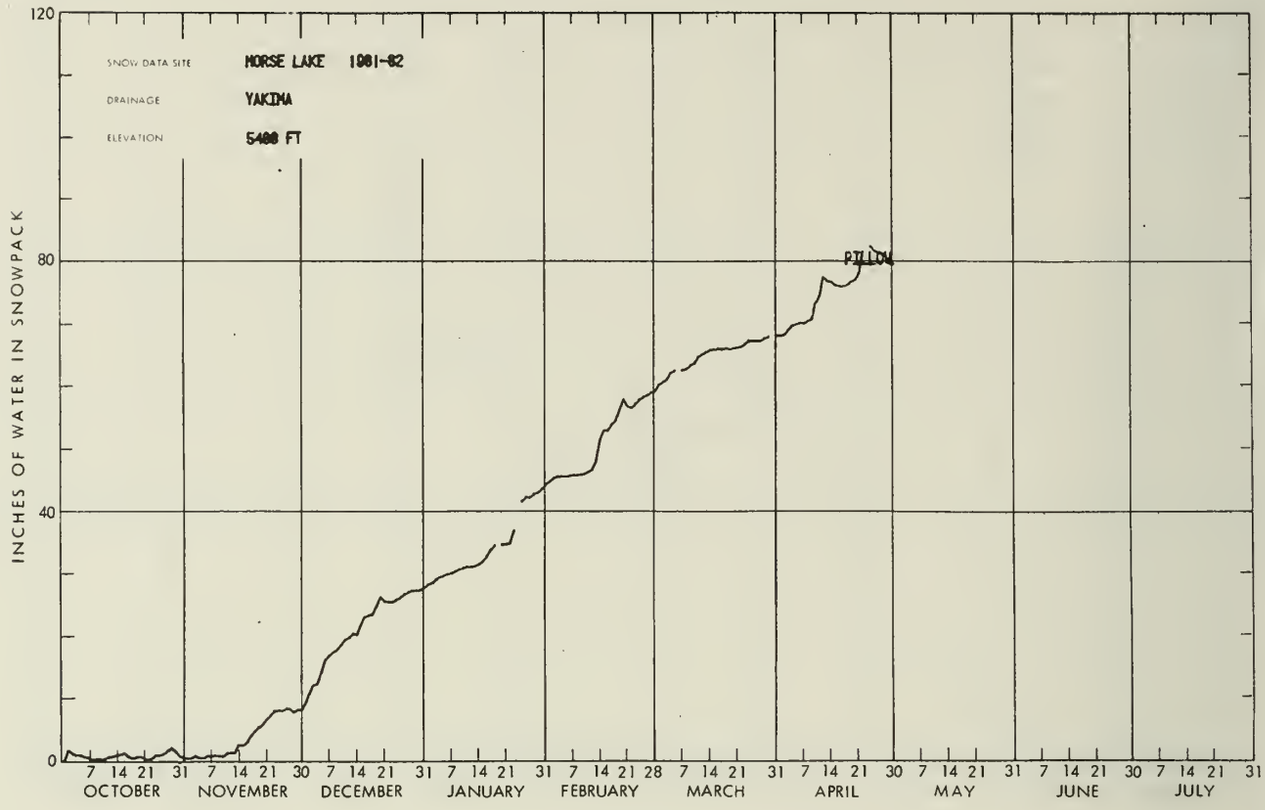
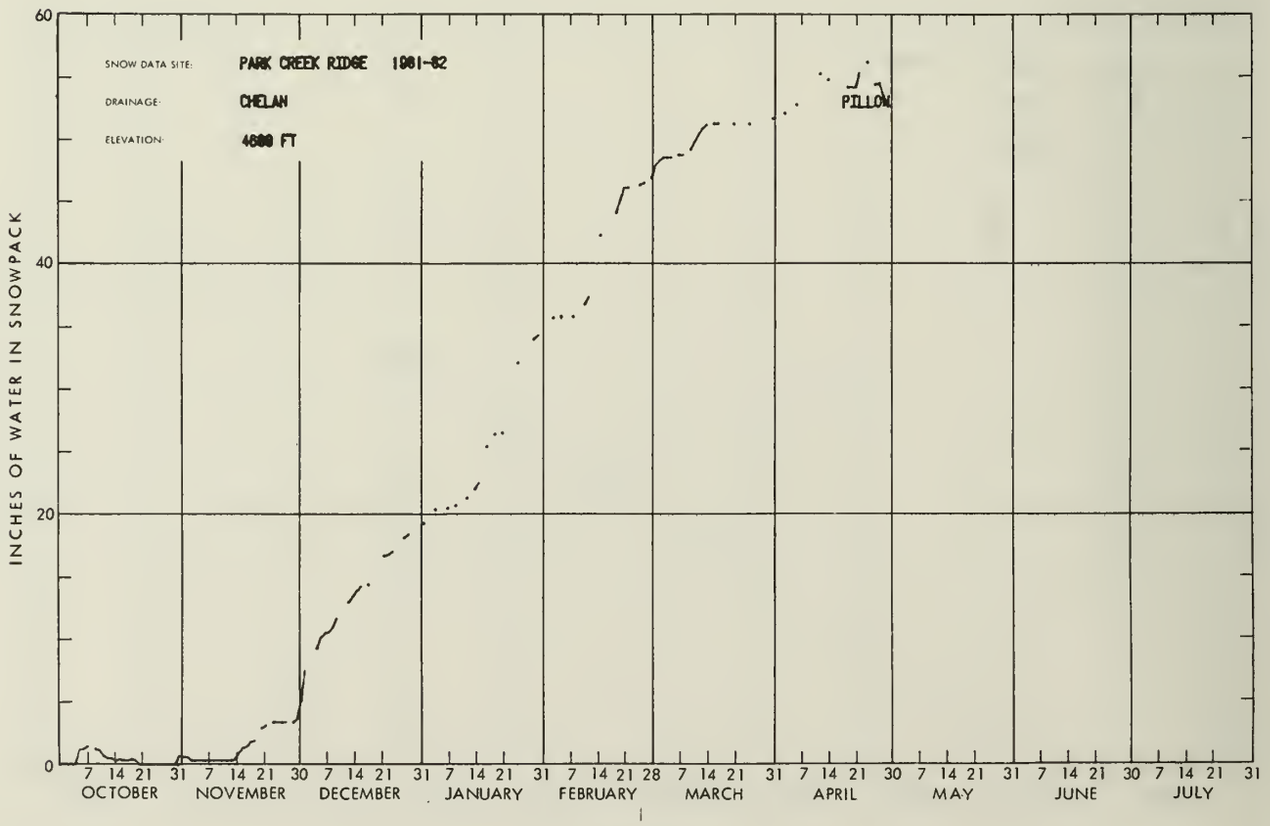
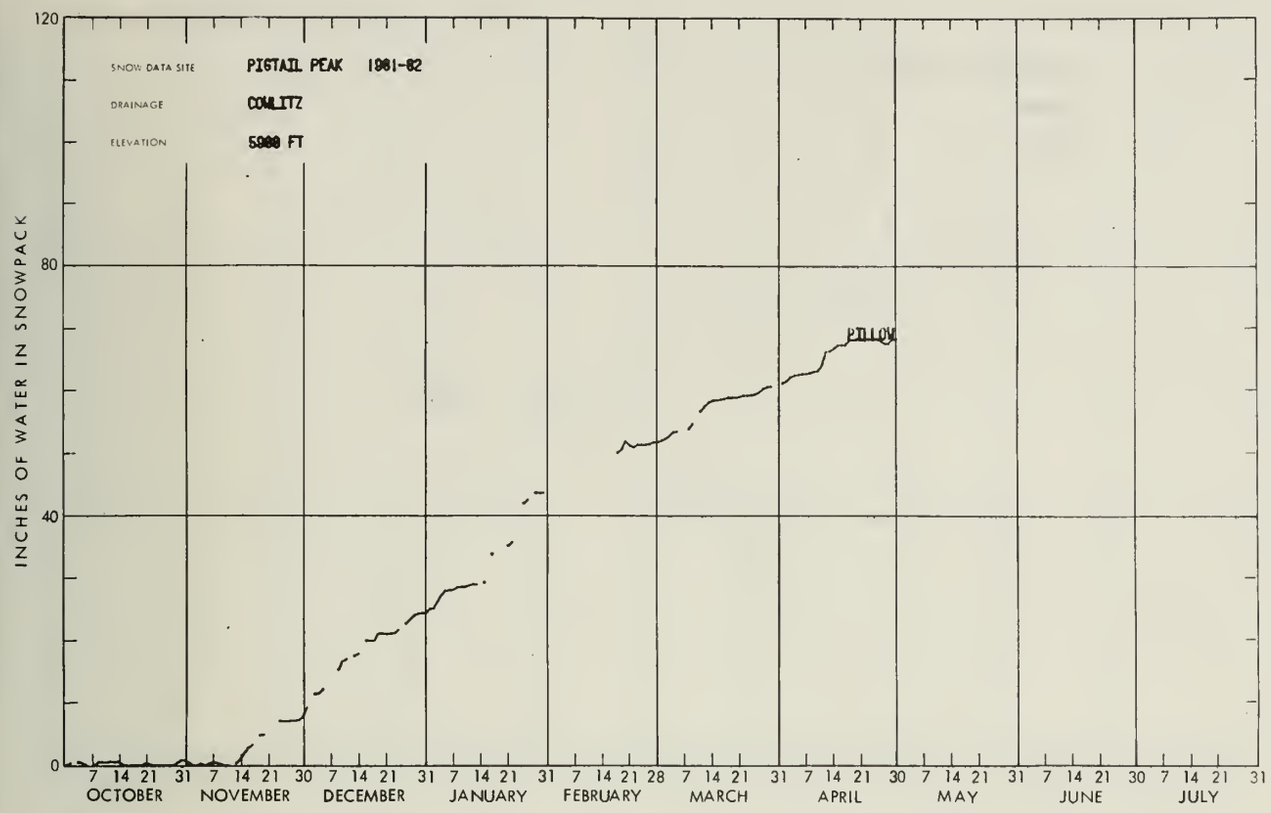
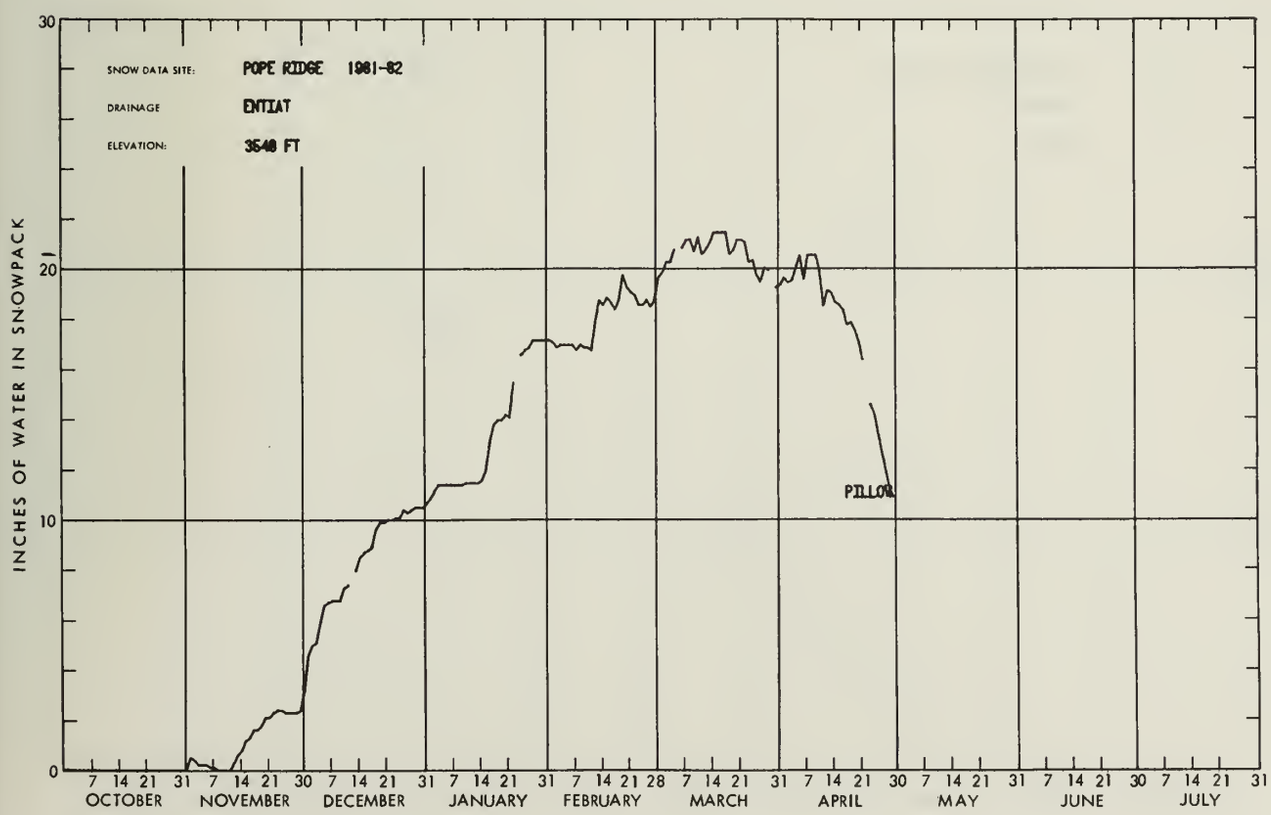
40
80
120
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE MORSE LAKE 1981-82
DRAINAGE YAKIMA
ELEVATION 5400 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: PARK CREEK RIDGE 1981-82
DRAINAGE: CHELAN
ELEVATION: 4600 FT
PILLOW
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE PIGTAIL PEAK 1981-82
DRAINAGE COWLITZ
ELEVATION 5900 FT
PILLOW
INCHES OF WATER IN SNOWPACK
120
80
40
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: POPE RIDGE 1981-82
DRAINAGE ENTIAT
ELEVATION: 3540 FT
PILLOW
INCHES OF WATER IN SNOWPACK
30
20
10
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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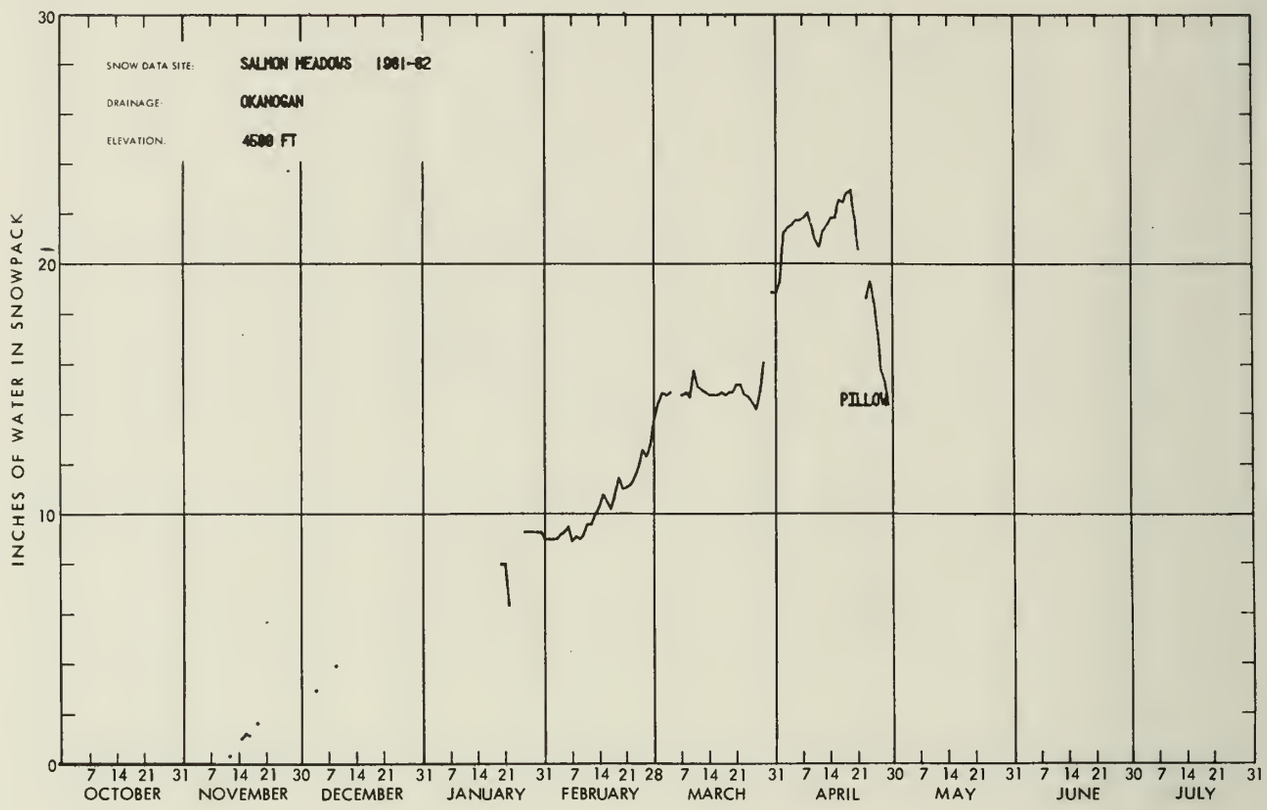
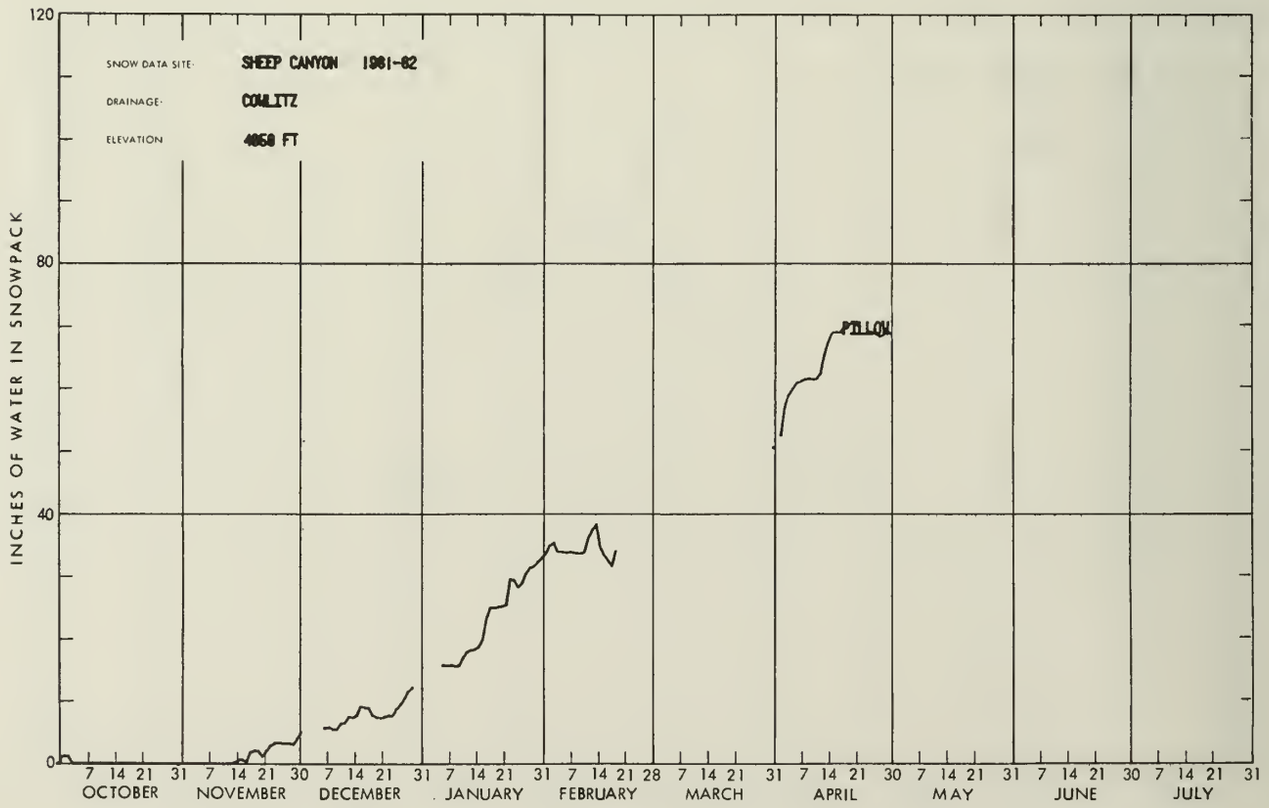

SNOW DATA SITE: SALMON MEADOWS 1981-82
DRAINAGE: OKANOGAN
ELEVATION: 4500 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
10
20
30
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: SHEEP CANYON 1981-82
DRAINAGE: COMLITZ
ELEVATION 4050 FT
INCHES OF WATER IN SNOWPACK
PILLOW
0
40
80
120
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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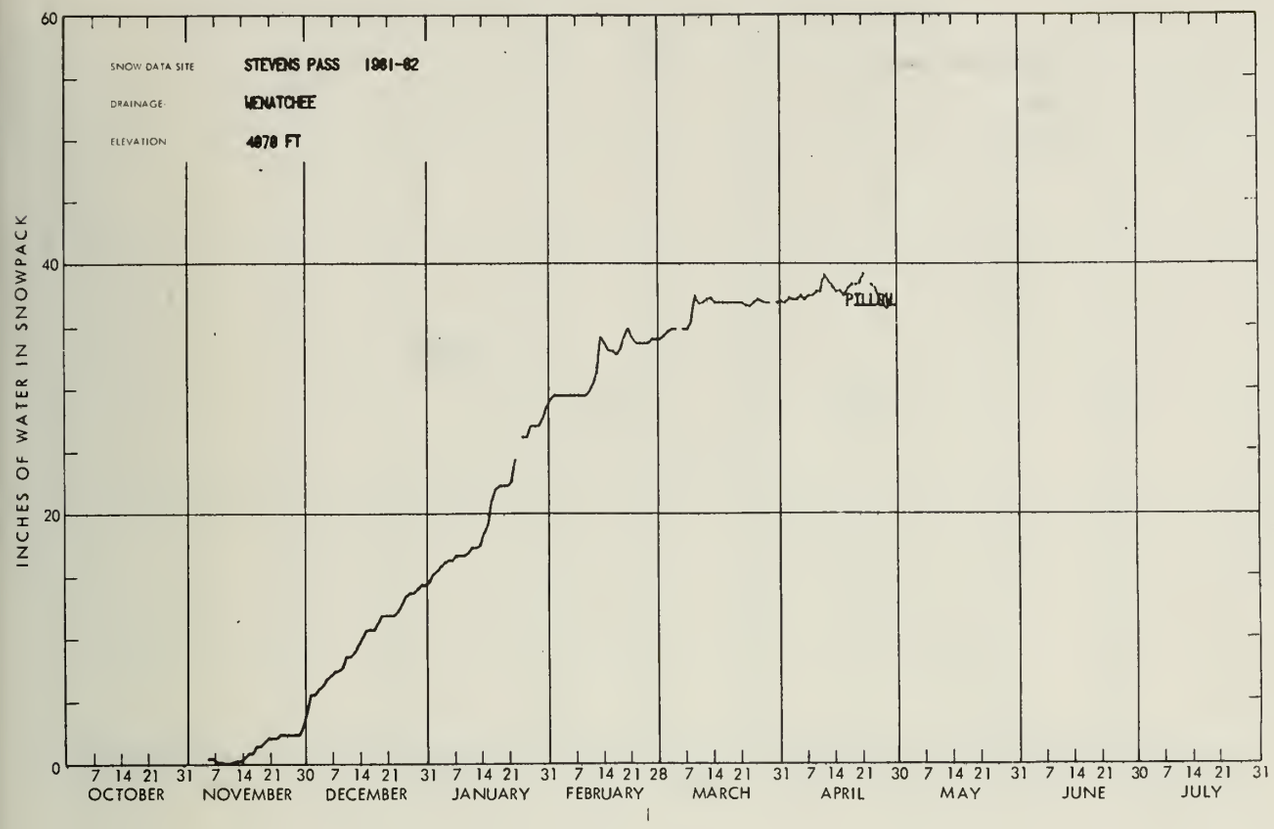
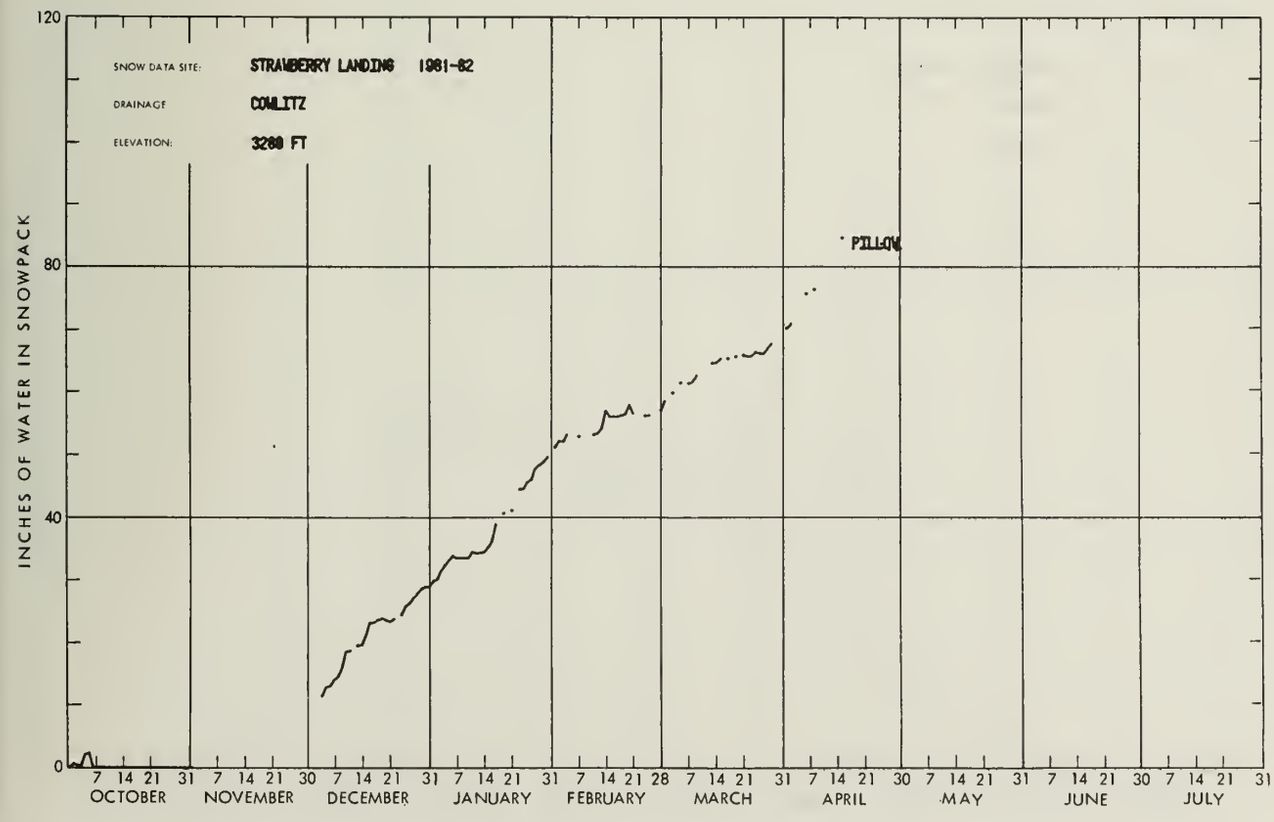
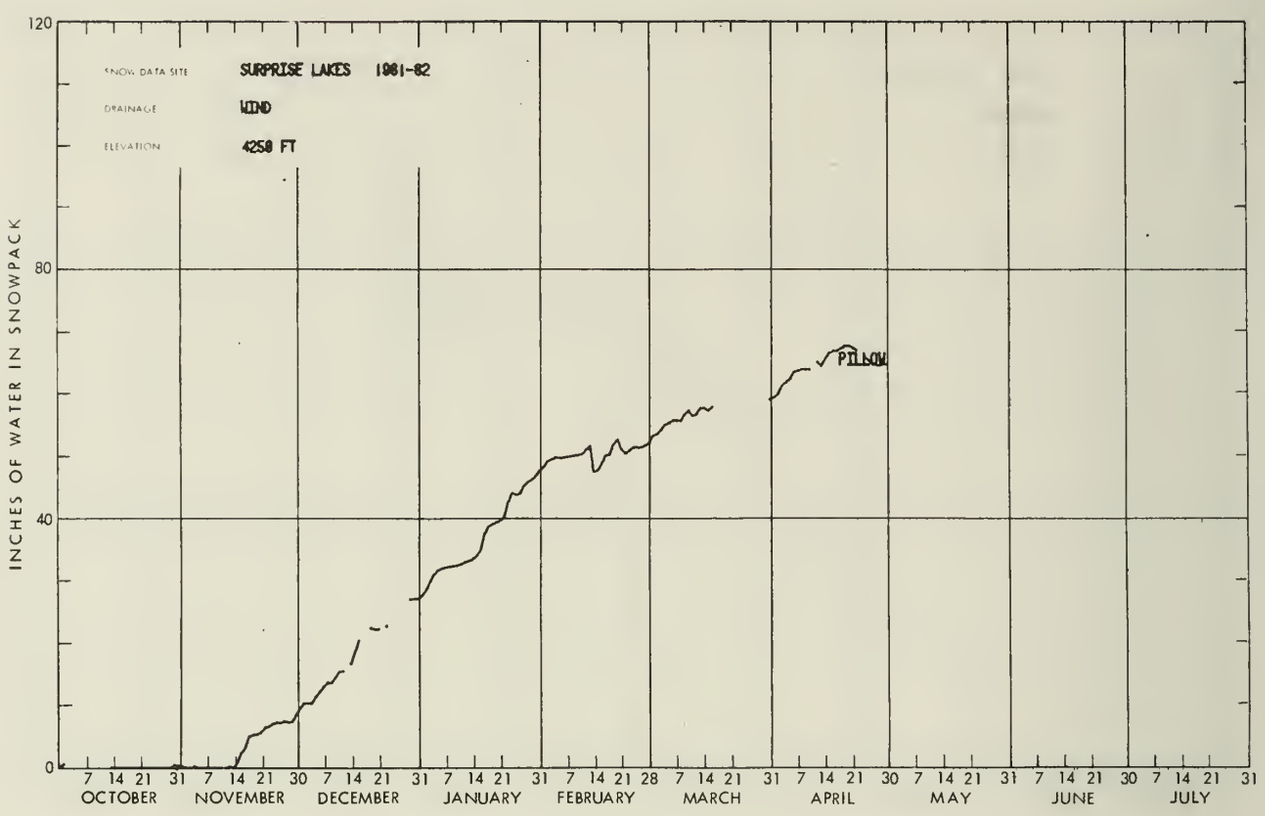
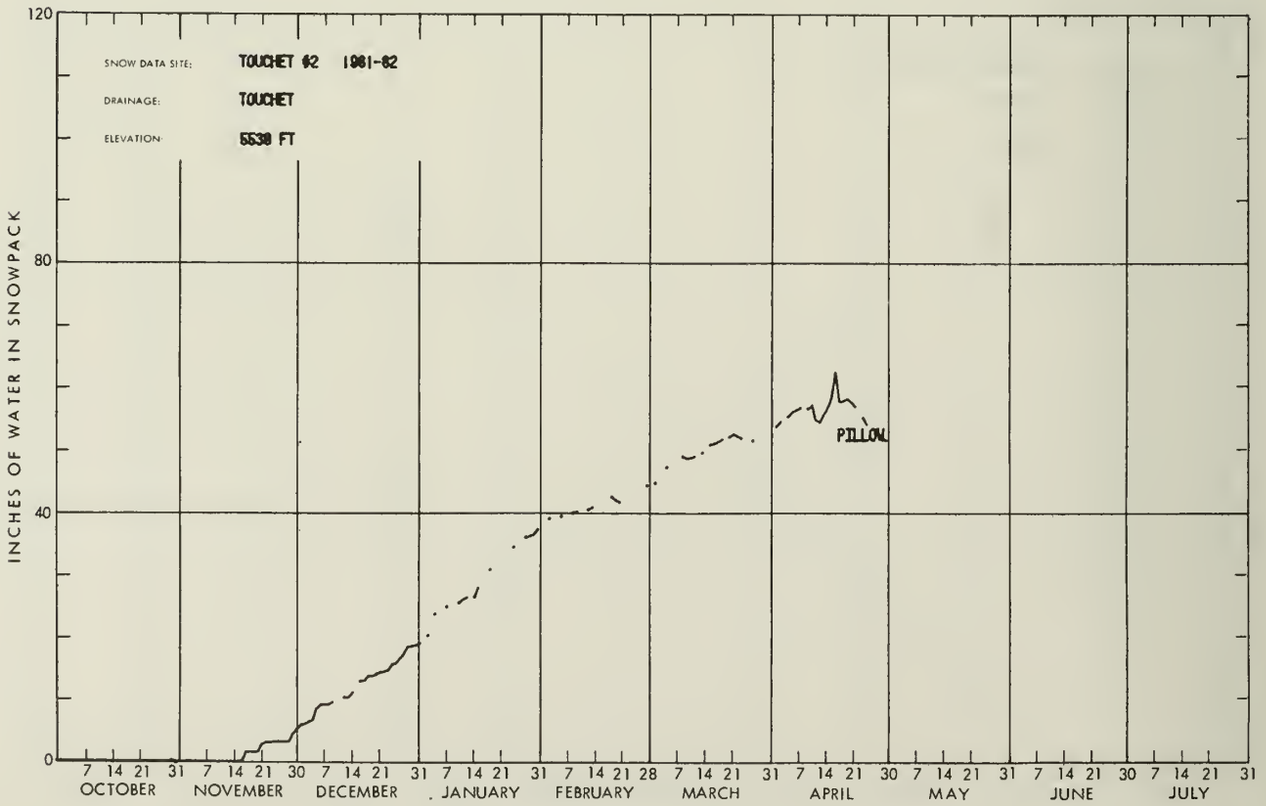

SNOW DATA SITE STEVENS PASS 1981-82
DRAINAGE WENATCHEE
ELEVATION 4070 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: STRAWBERRY LANDING 1981-82
DRAINAGE COWLITZ
ELEVATION: 3260 FT
PILLOW
INCHES OF WATER IN SNOWPACK
0
40
80
120
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE SURPRISE LAKES 1981-82
DRAINAGE WIND
ELEVATION 4250 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE: TOUCHET #2 1981-82
DRAINAGE: TOUCHET
ELEVATION: 5530 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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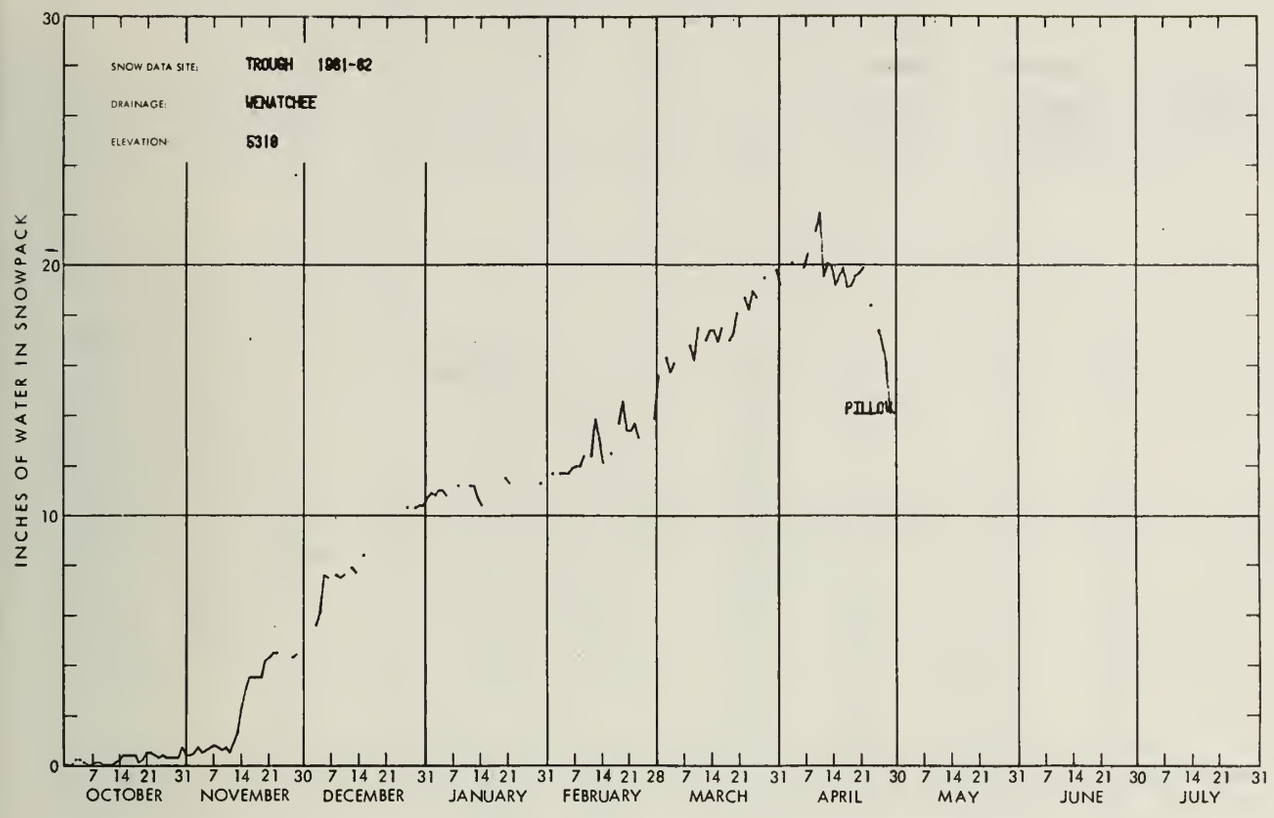
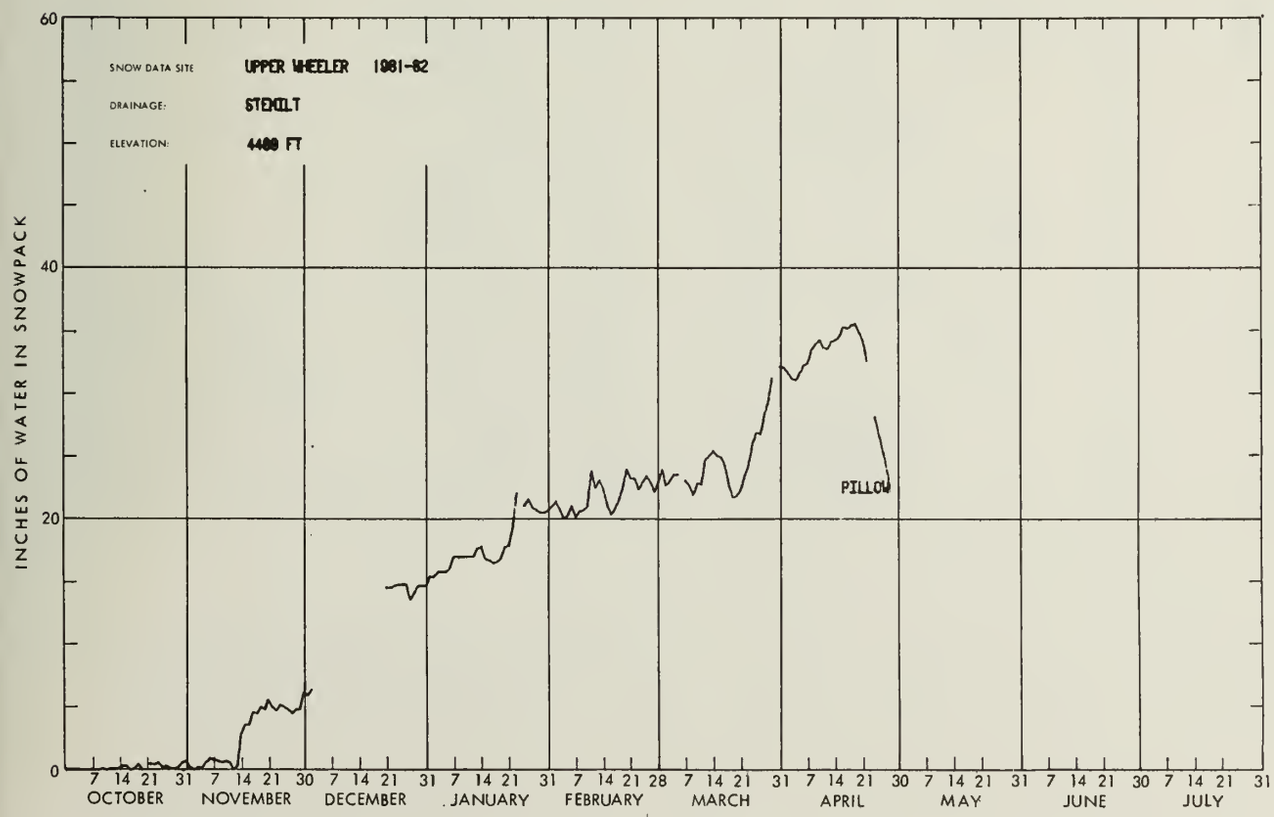
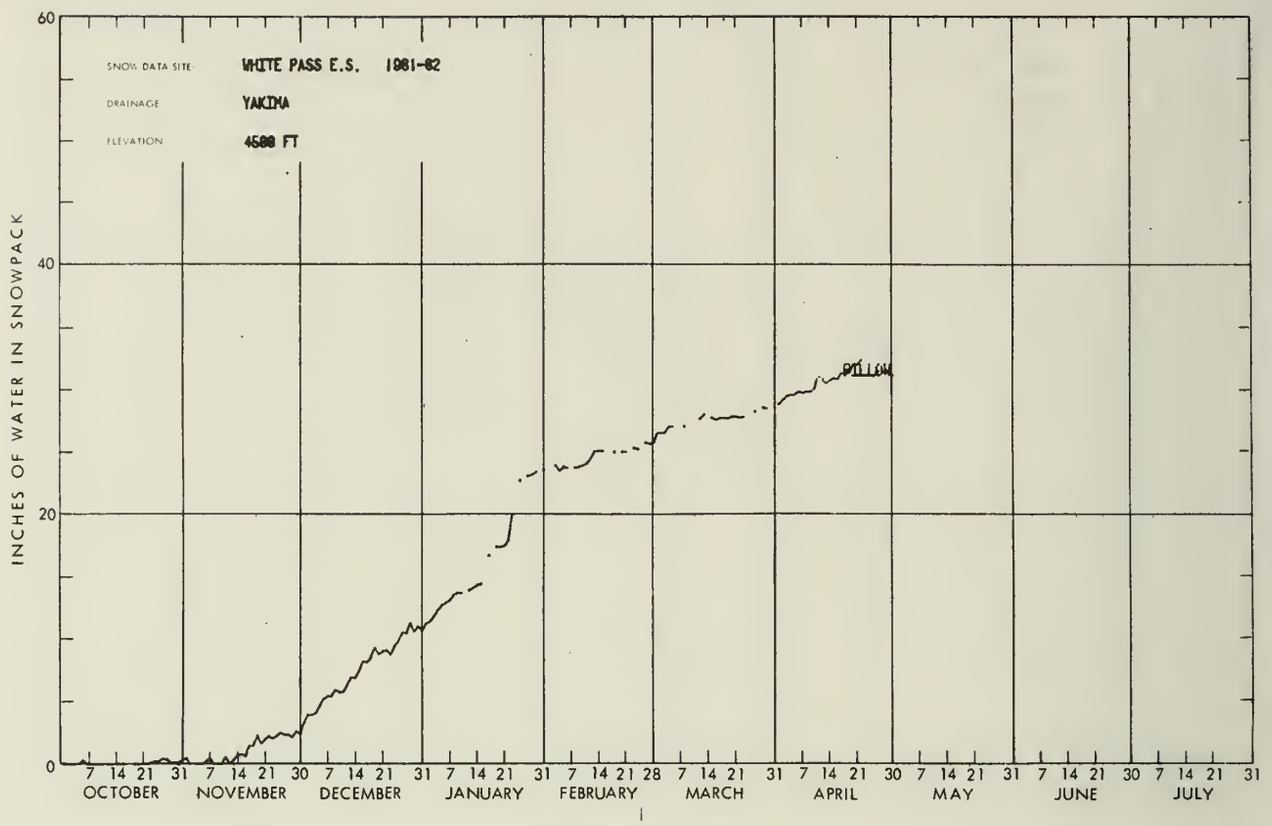

SNOW DATA SITE: TROUGH 1981-82
DRAINAGE: WENATCHEE
ELEVATION: 5310
INCHES OF WATER IN SNOWPACK
PILLOW
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE UPPER WHEELER 1981-82
DRAINAGE: STEKOLT
ELEVATION: 4400 FT
INCHES OF WATER IN SNOWPACK
PILLOW
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X13C


SNOW DATA SITE
WHITE PASS E.S. 1981-82
DRAINAGE
YAKIMA
ELEVATION
4500 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

SNOW DATA TO MAY 1, 1982 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Baree Creek	15B11	5500	4/28	112	51.5	26.6	49.5
Baree Midway	15B16	4600	4/28	89	38.6	12.2	35.1
Baree Trail	15B15	3800	4/28	9	3.7	0.0	1.8
Benton Meadow	16A02	2344	4/29	0	0.0	-	0.0
Benton Spring	16A03	4900	4/29	44	17.7	6.5	16.7
Boyer Mountain	17A02	5250	4/26	63	25.7	14.4	25.2
Brush Creek Timber	14A13	5000	4/28	26	9.4	0.0	8.1
Bunchgrass Meadow	17A01	5000	4/29	84	38.2	18.8	30.0
Heart Lake Trail	14C10	4800	4/30	54	25.2	0.0	19.1
Hoodoo Basin	15C10	6000	4/30	148	68.5	33.4	55.6
Hoodoo Creek	15C01	5900	4/30	136	61.8	30.1	52.0
Lookout	15B02	5250	4/15	113	41.4	21.2	38.6
			4/30	97	37.6	14.2	35.4
Nelson	2D04-Can	3050	4/30	32	13.0	0.7	6.8*
Schweitzer Bowl	16A06	4500	4/30	88	40.1	-	26.8
Schweitzer Ridge	16A05	6100	4/30	136	61.3	30.4	47.5
Smith Creek	16A01	4800	4/29	122	58.0	36.8	47.4
KETTLE RIVER							
Barnes Creek	2B06-Can	5300	4/26	56	23.4	16.9	20.5*
Big White Mtn.	2E03-Can	5500	5/1	62	21.7	18.1	20.9*
Bluejoint Mtn.	2E06-Can	7500	4/26	89	37.7	26.0	28.3*
Boulder Road	18A02	1450	Not Scheduled			0.0	0.0
Butte Creek	18A03	4070	Not Scheduled			1.7	6.0
Cabin Creek	18A08	3170	Not Scheduled			0.0	1.8
Carmi	2E02-Can	4100	5/4	7.5	2.6	0.0	1.9*
Farron # 1	2B02-Can	4000	4/29	34	13.6	5.9	8.3*
Farron # 2	2B02A-Can	4000	4/29	37	13.7	8.4	9.1*
Goat Creek	18A04	3595	Not Scheduled			0.0	-
Graystoke Lake	2F04-Can	5950	4/29	51	18.9	10.2	19.4*
Monashee Pass	2E01-Can	4500	4/26	41	16.5	10.2	12.7*
Old Glory Mountain	2B03-Can	7000	4/25	77	32.0	27.0	30.4*
Snow Caps Creek	18A05	2150	Not Scheduled			0.0	0.0
Snow Caps Trail	18A06	2720	Not Scheduled			0.0	0.0
Summit G.S.	18A07	4600	Not Scheduled			1.4	6.3
Trapping Creek Upper	2E04-Can	4450	5/4	20	7.7	1.8	5.8*

\# Average based on 1963-77 average
* Average for years of record

USDA SCS-PORTLAND OREGON 1973

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SNOW DATA TO MAY 1, 1982 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
SPOKANE RIVER							
Above Burke	15B08	6100	4/29	48	20.6	4.6	19.7
Copper Ridge	16B02	4800	5/3	39	16.7	0.0	25.7
Forty-nine Meadows	15B03	5000	4/29	68	28.0	7.1	26.9
Fourth of July Summit	16B03	3100	4/15	6.7	1.6	-	-
Granite Peak	15B13A	6000	4/29	139	50.0	23.1	47.6
Lookout	15B02	5250	4/15	113	41.4	21.2	38.6
			4/30	97	37.6	14.2	35.4
Lost Lake	15B14A	6000	4/29	170	63.6	31.4	62.5
Lower Sands Creek	16B01	3400	5/3	40	15.9	0.0	18.3
Sherwin	16C01	3200	4/29	23	10.0	0.0	7.2
OKANOGAN RIVER							
Aberdeen Lake	2F01A-Can	4300	4/29	15	5.7	0.0	1.6*
Blackwall Mountain	2G03-Can	6250	5/3	88	37.5	27.9	37.3*
Bouleau Lake	2F21-Can	4580	4/25	51	18.0	11.1	13.0*
Brenda Mine	2F18-Can	4800	4/28	35	13.7	7.7	9.8*
Brookmere	1C01-Can	3200	5/1	25	6.9	0.8	5.5*
Enderby	2F04-Can	6250	4/28	128	54.1	42.5	42.3*
Esperon Creek Lower	2F15-Can	4400	4/25	34	12.7	6.1	9.1*
Esperon Creek Middle	2F14-Can	4700	4/25	39	14.1	8.5	12.3*
Esperon Creek Upper	2F13-Can	5400	4/26	50	19.8	11.2	18.0*
Freezeout Mdw. New	20A38	5000	4/26	77	21.8	18.0	40.3
Grayback Res.	2F08-Can	5225	4/29	31	10.4	6.8	7.9*
Graystoke Lake	2F04-Can	5950	4/29	51	18.9	10.2	19.4*
Hamilton Hill	2G06-Can	4900	4/28	37	14.6	6.1	12.9*
Harts Pass	20A05A	6500	4/26	120	48.7	32.9	51.5
Isintok Lake	2F11-Can	5510	5/3	25	8.3	2.7	6.9*
Lightning Lake	3D02-Can	4000	4/29	36	13.0	3.7	10.7*
Lost Horse Mountain	2G04-Can	6300	4/30	35	11.7	5.2	10.3*
Loup Loup	19A07	4650	4/29	24	8.8	0.0	6.1
McCulloch	2F03-Can	4200	4/30	12	4.0	3.3	2.7*
Missezula Mountain	2G05-Can	5100	4/27	26	9.1	3.9	5.9*
Mission Creek	2F05-Can	6000	4/29	61	24.8	18.0	21.5*
Monashee Pass	2E01-Can	4500	4/26	41	16.5	10.2	12.7*
Mount Kobau	2F12-Can	5950	4/29	50	16.5	10.4	12.7*
Mutton Creek No. 1	19A01	5700	4/29	51	18.8	4.5	11.3
Mutton Creek No. 2 SP	19A11	6000	4/30	-	15.4	5.6	13.9
Nickel Plate Mtn.	2G02-Can	6200	4/25	28	9.3	2.7	7.9*
Oyama Lake	2F19-Can	4400	4/30	15	5.0	0.0	2.8*
Postill Lake	2F07-Can	4500	4/30	24	8.0	5.4	6.6*
Rusty Creek	19A03	4000	4/29	8.5	2.5	0.0	0.8
Salmon Meadows	19A02	4500	4/29	30	10.4	2.4	6.2
Silver Star Mountain	2F10-Can	6050	5/1	81	37.2	22.0	28.0*
Summerland Reservoir	2F02-Can	4200	5/3	22	8.3	3.3	6.6*
Sunday Summit	2G01A-Can	4300	4/29	3.1	1.2	0.0	1.0*

\# Average based on 1963-77 average

* Average for years of record

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO MAY 1, 1982 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
OKANOGAN RIVER (Cont.)							
Trout Creek	2F01-Can	4700	4/28	17	5.4	0.4	5.1*
Vaseux Creek	2F20-Can	4600	4/29	17	4.8	1.3	2.4*
White Rocks Mountain	2F09-Can	6000	4/30	59	26.6	13.6	23.7*
METHOW RIVER							
Harts Pass	20A05A	6500	4/26	120	48.7	32.9	51.5
Loup Loup	19A07	4650	4/29	24	8.8	0.0	6.1
Mutton Creek No. 1	19A01	5700	4/29	51	18.8	4.5	11.3
Mutton Creek No. 2 SP	19A11	6000	4/30	-	15.4	5.6	13.9
Rusty Creek	19A03	4000	4/29	8.5	2.5	0.0	0.8
Salmon Meadows	19A02	4500	4/29	30	10.4	2.4	6.2
CHELAN LAKE BASIN							
Park Creek Ridge	20A12A	4600	4/30	-	52.5	-	31.7
Rainy Pass	20A09	4780	4/27	103	42.8	30.0	47.5
ENTIAT RIVER							
Blue Creek G.S.	20B28a	5425	4/29	122	53.9	29.5	39.9
Brief	20B19	1600	4/26	0	0.0	0.0	0.0
Entiat Meadows +	20A33a	4540	4/29	114	50.4	22.1	35.7
Entiat River Trail +	20A34a	3325	4/29	34	15.2	0.0	3.0
Four Mile Ridge +	20B27a	6800	4/29	98	43.3	19.7	38.5
Fox Camp +	20A36a	6510	4/29	158	69.8	15.6	64.1
Pope Ridge	20B20	3540	4/27	40	17.8	0.0	9.8
Pugh Ridge +	20A32a	6725	4/29	97	42.9	25.0	30.8
Shady Pass	20A37	6200	4/27	84	37.3	16.0	31.6
Snow Brushy +	20A35a	3910	4/29	93	41.6	18.4	29.4
Tommy Creek +	20B21a	4900	4/29	52	23.0	11.5	21.7
WENATCHEE RIVER							
Berne-Mill Creek	21B23	2925	4/28	68	31.8	7.7	23.9
Berne-Mill Creek New SP	21B41	3240	4/28	52	26.0	0.0	19.8
Blewett Pass No. 2	20B02	4270	4/14	38	14.7	4.8	15.3
			4/23	34	15.1	0.0	10.8
Chiwaukum G.S.	20B16	1810	4/28	9.2	4.1	-	1.5
Fish Lake	21B04	3371	5/4	63	32.4	-	28.0
Lake Wenatchee	20B05	1970	4/28	16	7.7	-	2.7
Merritt	20B18	2140	4/28	23	10.5	-	5.5
Stevens Pass	21B01	4070	4/14	131	59.3	22.8	56.3
			4/28	124	58.6	18.2	57.5
Stevens Pass Sand Shed	21B45	3700	4/14	96	42.1	12.3	38.0
			4/28	83	40.0	4.7	37.3

\# Average based on 1963-77 average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS-PORTLAND OREGON 1973

WSFB-X4-L

SNOW DATA TO MAY 1, 1982 - APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Number	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average #
SQUILCHUCK CREEK							
Beehive Springs	20B03	4400	4/29	2.1	0.9	0.0	2.2
Scout-A-Vista	20B04	3400	4/29	0	0.0	0.0	0.3
STEMILT CREEK							
Jump-Off	20B08	4450	4/28	8	2.8	0.0	3.3
Stemilt Slide	20B06	5000	4/29	20	8.4	0.0	7.8
Upper Wheeler	20B07	4400	4/29	0	0.0	0.0	1.3
COLOCKUM CREEK							
Colockum Creek Upper	20B22	5300	4/28	26	10.4	0.0	10.8
Colockum Creek Lower	20B23	4300	4/28	5.8	2.0	0.0	2.8
Trough # 2	20B25SP	5310	4/28	40	16.5	0.0	New
YAKIMA RIVER							
Ahtanum R. S.	21C11	3100	4/26	0	0.0	-	-
Big Boulder Creek	21B09	3200	5/4	26	10.9	0.0	10.9
Blewett Pass No. 2	20B02	4270	4/14	38	14.7	4.8	15.3
			4/23	34	15.1	0.0	10.8
Bumping Lake	21C08	3450	4/16	33	12.4	0.5	13.8
			4/30	17	8.1	0.0	10.2
Bumping Lake New	21C36	3400	4/16	43	18.8	1.6	19.6
			4/30	28	13.6	0.0	15.2
Cayuse Pass	21C06	5300	5/3	-	94.0	-	98.1
Corral Pass	21B13	6000	4/27	114	53.1	22.2	42.6
Fish Lake	21B04	3371	5/4	63	32.4	-	28.0
Green Lake	21C10	6000		Not Measured		17.1	-
Joe Lake +	21B46a	4624	4/30	180	93.6	39.2	67.0
Lake Cle Elum	21B14M	2200	4/13	3.8	1.7	0.0	2.7
			4/30	0	0.0	0.0	-
Lemah Creek +	21B47a	3327	4/30	75	39.0	0.0	40.3
Morse Lake	21C17	5400	4/28	148	72.8	32.4	61.9
Olallie Meadows	21B02	3625	4/27	108	53.7	12.3	53.4
Satus Pass	20D01	4030	4/27	0	0.0	-	3.9
Stampede Pass SP	21B10	3860	4/16	116	55.4	14.5	42.9
			4/26	100	52.8	16.7	43.4
Tunnel Avenue	21B08	2450	4/14	53	23.2	3.3	23.9
			4/28	44	20.3	0.0	17.5
Van Epps Pass +	20B26a	5925	4/30	144	74.9	27.9	56.1
Waptus Lake +	21B49a	3024	4/30	78	40.6	0.0	38.9
White Pass (E. Side)	21C28	4500	4/14	81	29.7	7.5	26.9
			4/29	69	30.7	0.0	27.6
AHTANUM CREEK							
Ahtanum R.S.	21C11	3100	4/26	0	0.0	-	-
Green Lake	21C10	6000		Not Measured		17.1	-

\# Average based on 1963-77 average
\+ Snow water equivalent estimated from aerial stadia observation

USDA SCS-PORTLAND OREGON 1973

SNOW DATA TO MAY 1, 1982 - APPENDIX 5

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
LOWER COLUMBIA DRAINAGE							
ASOTIN CREEK							
Spruce Springs	17C04	5700	4/26	64	31.4	8.2	24.8
MILL CREEK							
High Ridge	18D19	4150	5/3	74	36.4	11.9	27.0
KLICKITAT RIVER							
Satus Pass	20D01	4030	4/27	0	0.0	-	3.9
LEWIS RIVER							
June Lake	22C05	3200	4/15	-	34.0	-	38.9
			5/2	-	28.4	0.9	33.6
Lone Pine Shelter	21C26	3800	4/15	-	60.5	-	45.6
			5/2	-	63.4	13.9	48.0
Plains of Abraham	22C01	4400	4/15	-	-	-	71.1
			5/1	-	-	4.6	77.4
Spencer Meadow	21C20a	3400	4/15	-	-	-	27.1
			5/1	-	-	7.3	19.0
Surprise Lakes	21C13A	4250	4/15	-	66.8	-	53.7
			5/2	-	64.1	-	53.4
Table Mountain	21C24a	4200	4/15	-	-	-	50.7
			5/1	-	-	-	49.2
COWLITZ RIVER							
Cayuse Pass	21C06	5300	5/3	-	94.0	-	98.1
Strawberry Landing	22C08SP	3280	4/15	-	84.8	-	-
			4/30	-	83.1	-	-
White Pass (E. Side)	21C28	4500	4/14	81	29.7	7.5	26.9
			4/29	69	30.7	0.0	27.6
PUGET SOUND DRAINAGE							
WHITE RIVER							
Cayuse Pass	21C06	5300	5/3	-	94.0	-	98.1
Corral Pass	21B13	6000	4/27	114	53.1	22.2	42.6
Morse Lake	21C17	5400	4/28	148	72.8	32.4	61.9
GREEN RIVER							
Airstrip	21B24	1800	5/1	0	0.0	-	2.1
Charley Creek	21B25	1200	5/1	0	0.0	-	-
Cougar Mountain SP	21B42	3200	4/27	47	22.3	0.0	20.7
Grass Mtn. No. 2	21B27	2900	5/1	24	10.5	-	-
Grass Mtn. No. 3	21B28	2100	5/1	0	0.0	-	-

Average based on 1963-77 average

USDA SCS PORTLAND OREGON 1973

SNOW DATA TO MAY 1, 1982 - APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Number	Elevation	THIS YEAR: Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	Average #
GREEN RIVER (Cont.)							
Lester Creek	21B29	3100	5/1	59	23.2	-	-
Lynn Lake	21B50	4000	5/1	50	24.5	-	-
Sawmill Ridge	21B31	4700	5/1	88	39.8	-	-
Snowshoe Butte SP	21B43	5000	4/27	139	66.0	25.2	67.7
Stampede Pass SP	21B10	3860	4/16	116	55.4	14.5	42.9
			4/26	100	52.8	16.7	43.4
Twin Camp	21B30	4100	5/1	63	29.3	-	-
SNOQUALMIE RIVER							
Olallie Meadows	21B02	3625	4/27	108	53.7	12.3	53.4
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	4/14	131	59.3	22.8	56.3
			4/28	124	58.6	18.2	57.5
Stevens Pass Sand Shed	21B45	3700	4/14	96	42.1	12.3	38.0
			4/28	83	40.0	4.7	37.3
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	4/27	20	8.9	0.0	7.3
Beaver Pass	21A01	3680	4/26	90	35.9	6.3	34.5
Brown Top Ridge +	21A28a	6000	4/26	160	66.8	46.8	74.7
Devils Park	20A04	5900	4/26	116	47.2	34.4	50.4
Freezeout Creek Trail	20A01	3500	4/27	32	13.1	0.0	10.2
Freezeout Meadows New	20A38	5000	4/26	77	31.8	18.0	40.3
Granite Creek	20A06	3500	4/27	40	16.6	1.7	18.2
Harts Pass	20A05A	6500	4/26	120	48.7	32.9	51.5
Klesilkwa	3D03A-Can	3700	4/27	35	15.0	0.0	6.4*
Lightning Lake	3D02-Can	4000	4/29	36	13.0	3.7	10.7*
Meadow Cabins	20A08	1900	4/27	4.8	2.1	0.0	1.9
New Hozomeen Lake	21A30	2800	4/26	20	8.3	0.0	10.5
New Tashme	3D01A-Can	2500	4/30	20	7.4	0.0	3.0*
Rainy Pass	20A09	4780	4/27	103	42.8	30.0	45.7
Thunder Basin	20A07	4200	4/27	70	26.8	7.8	26.2
BAKER RIVER							
Dock Butte	21A11A	3800	4/4	175	70.0	-	74.5
Easy Pass	21A07A	5200		Not Measured		-	88.7
Jasper Pass	21A06A	5400		Not Measured		-	92.6
Marten Lake	21A09A	3600	4/4	204	82.0	-	82.8
Mount Blum +	21A18a	5800		Not Measured		-	65.9
Panorama New	21A26	4300		Not Measured		-	77.0
Rocky Creek	21A12A	2100	4/4	88	35.0	-	34.4
Schreibers Meadow	21A10A	3400	4/4	144	58.0	-	68.8
S. F. Thunder Creek	21A14A	2200	4/4	20	8.0	-	7.9
Watson Lakes	21A08A	4500	4/4	166	60.0	-	72.3

\# Average based on 1963-77 average
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

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SNOW DATA TO MAY 1, 1982 - APPENDIX 7

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
NOOKSACK RIVER							
Glacier Creek	21A23	3700		Not Measured		-	27.1
Panorama New	21A26	4300		Not Measured		25.3	88.3
OLYMPIC PENINSULA							
DUNGENESS RIVER							
Deer Park	23B04	5200	4/26	67	28.9	3.7	24.2
MORSE CREEK							
Cox Valley	23B14	4500	4/29	132	55.6	15.1	45.3
ELWHA RIVER							
Hurricane	23B03	4500	4/27	76	28.7	6.5	28.2

Average based on 1963-77 average

USDA SCS PORTLAND OREGON 1973

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Conodo:

Ministry of the Environment, Woter
Investigotions Branch, Victorio, British Columbia

States:

Washington Stote Department of Ecology
Washington State Department of Naturol Resources

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Department of the Army
  Corps of Engineers
U. S. Department of Agriculture
  Forest Service
U. S. Department of Commerce
  NOAA, National Weather Service
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  Bonneville Power Administration
  Bureau of Reclamation
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Chelan County P.U.D.
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OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenotchee Heights Irrigation District

MUNICIPALITIES

City of Tacomo
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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Water Supply Outlook For Washington

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Cooperating with

PARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
June 1, 1982

USDA SCS PORTLAND OR 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Mast af the usable water in western states ariginates as mauntain snowfall. This snowfall accumulates during the winter and spring, several months before the snaw melts and appears as streamflow. Since the runaff fram precipitatian as snaw is delayed, estimates of snowmelt runoff can be made well in advance af its accurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mauntain snowpack.

Farecasts become mare accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factars during the remainder of the snaw accumulation and melt season will interact with a resultant average effect on runoff. Early season farecasts are therefore subject to a greater change than thase made on later dates.

The snaw course measurement is abtained by sampling snow depth and water equivalent at surveyed and marked lacations in mountain areas. A tatal of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in mast states. There are abaut 1900 snaw courses in Western United States and in the Calumbia Basin in British Calumbia. Netwarks of automatic snaw water equivalent and related data sensing devices, alang with radio telemetry are expanding and will pravide a continuous record of snow water and other parameters at key locatians.

Detailed data on snow caurse and soil moisture measurements are presented in state and local reparts. Other data an reservair storage, summaries of precipitatian, current streamflaw, and sail maisture canditians at valley elevations are alsa included. The report far Western United States presents a broad picture af water supply outlaak conditions, including selected streamflow farecasts, summary of snow accumulation to date, and storage in larger reservairs.

Snaw survey and soil maisture data for the period of record are published by the Soil Canservation Service by states abaut every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservatian Service publishes reports fallowing the principal snow survey dates fram January 1 thraugh June 1 in cooperation with state water administrators, agricultural experiment stations and athers. Copies af the reports far Western United States and all state reports may be obtained from Sail Conservatian Service, West Technical Service Center, Raam 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state affices of the Sail Conservatian Service in the fallawing states:

STATE	ADDRESS
Alaska	Raam 129, 2221 East Narthern Lights Blvd., Anchorage, Alaska 99504
Arizana	Raam 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Calarado (N. Mex.)	P. O. Bax 17107, Denver, Calarado 80217
Idaho	Room 345, 304 N. 8th. St., Baise, Idaha 83702
Mantana	P. O. Bax 98, Bozeman, Mantana 59715
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Washingtan	360 U. S. Caurt House, Spokane, Washingtan 99201
Wyoming	P. O. Bax 2440, Casper, Wyaming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

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WATER SUPPLY OUTLOOK FOR WASHINGTON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

PETER C. MYERS
Chief
SOIL CONSERVATION SERVICE
WASHINGTON, D C

Released by

LYNN A. BROWN
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

In Cooperation with

DONALD W. MOOS
DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor

DONALD R. EASTLUND, Hydrologic Technician
NORINE P. KENT, Statistical Assistant

SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

WATER SUPPLY OUTLOOK

State of Washington

June 1, 1982

The water supply outlook for the State of Washington as of June 1 can be considered good. We have had a cold, dry May and runoff has been near normal. Our snow packs, the few that were measured in the State of Washington, indicate near normal conditions as of June 1. But our high elevation tributary measurements show that the meltoff has been delayed and we still have well above normal snowpacks in the high country. This is especially true in British Columbia and Western Montana. In British Columbia, of the nearly one-hundred snow course measurements received in this office, only one had a subnormal amount of snow water equivalent. Reservoirs seem to be in reasonable shape. Irrigation reservoirs have 13 percent more water than normal for this time of year and power reservoirs 4 percent less. All reservoirs are being managed for retention of expected spring runoff.

THIS IS THE LAST WATER SUPPLY REPORT FOR 1982. IF YOU WISH TO RECEIVE THESE REPORTS NEXT YEAR, PLEASE RETURN THE BACK COVER OF THE APRIL 1 REPORT IF YOU HAVE NOT ALREADY DONE SO.

SNOW COVER

As stated above, very few snow courses were measured on June 1. Slightly more were measured as of May 15 and the results of these measurements are reported herein. Summarizing the measurements in the Pend Oreille drainage shows an increase of 8 percentage points from May 15 to June 1. The snowpack in the Kettle River drainage increased 59 percentage points, but the Okanogan decreased 85 percentage points. These percentage figures are really not significant but are presented for information only. In the Entiat drainage, measurements are not made on May 15 but the June 1 snow course readings average out 7 percent above normal. The same is true for the Wenatchee drainage, except the snowpack there is exactly normal. In the Yakima drainage, no measurements were made on June 1, but the May 15 readings indicate the snowpack to be 8 percent less than average.

PRECIPITATION

Rainfall that occurs at both high and low elevations is the key factor for the June 1 water supply outlook. If above normal precipitation occurs and the temperatures are warm, then the melt is increased and flooding usually occurs. This year, we have had very little rainfall throughout the whole Columbia basin and only that portion of the drainage division called Columbia Above Castlegar had above normal rainfall and this by only one percentage point. The other drainage divisions, as reported by the National Weather Service, were all very much subnormal with Southeastern Washington and Southwest Slope Cascades having 61 percent below average rainfall during the month. The seven drainage divisions reported by the National Weather Service show that the other drainage divisions had from 41 to 84 percent of normal rainfall during the month of May. It is interesting to note that along the East Slopes of the Cascades, which includes all of the Cascades from Okanogan through the Yakima, precipitation was exactly the same, percentagewise, as last month.

RESERVOIRS

The reservoirs as tabulated in this report indicate the irrigation reservoirs have a considerable amount of water in storage. Only Lake Cle Elum still is questionable as to whether it will fill or not. As previously stated, water from Lake Cle Elum has been released as a result of court orders to supply downstream fish water. The power reservoirs, with the exception of Lake Couer d' Alene, have generally subnormal amounts of water in storage, but these are being managed for filling with the subsequent spring runoff.

STREAMFLOW

Runoff figures, as reported by the Bureau of Reclamation and individual power companies, indicate near normal conditions occurred throughout the state with a few streams showing subnormal flows while most showed normal or slightly above. The range is from 8 percent below normal for the Lewis River to 20 percent above for the Yakima as measured at Cle Elum. Forecasts are not made as of June 1. Percentage flows are expected to be the same as that which was forecast on May 1.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured June 1 1982	1981	1980	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	283.0	213.7	242.5	225.0
Columbia	Franklin D. Roosevelt Lake	5232.0	2340.5	4845.6	5058.7	2565.6
Columbia	Banks Lake	714.9	632.0	672.2	680.2	406.2
Okanogan	Conconully Reservoir	13.0	13.1	13.2	13.0	9.1
Okanogan	Conconully Lake	10.5	10.4	10.4	10.5	9.4
Chelan	Lake Chelan	676.1	391.7	653.5	570.6	450.6
		YAKIMA				
Yakima	Keechelus Lake	157.8	149.2	147.4	147.1	139.6
Kachess	Kachess Lake	239.0	229.6	237.2	163.0	217.1
Cle Elum	Lake Cle Elum	436.9	326.5	436.4	436.2	367.9
Bumping	Bumping Lake	33.7	29.8	33.1	33.4	25.4
Tieton	Rimrock Lake	198.0	189.8	193.2	198.8	160.2
		PUGET SOUND				
Skagit	Ross Reservoir	1404.1	855.6	1362.1	1129.5	1033.9
Skagit	Diablo Reservoir	90.6	87.4	86.7	85.1	86.1
Skagit	Gorge Reservoir	9.8	7.9	7.9	7.2	8.3

1/ Based on Active Storage

* 15-yr. Average 1963-1977

PRECIPITATION 1/
Division Average Observations and Departures

Drainage Divisions	FALL Sept-Oct 1981 2/ Observed	FALL Departure	WINTER Nov 1981 - Mar 1982 Observed	WINTER Departure	SPRING Apr-May 1982 2/ Observed	SPRING Departure
Columbia in Canada	5.17	+0.15	17.05	+1.54	2.97	-0.50
Pend Oreille - Spokane	3.56	-0.48	19.70	+2.15	4.27	+0.42
Northeastern Washington	3.28	+0.80	10.12	+0.72	2.25	-0.76
Southeastern Washington	3.03	+0.52	12.95	+2.52	2.39	-0.54
Central Washington	4.87	+0.12	32.22	+4.69	2.77	-0.72
North Central Washington	2.61	+1.02	7.28	+0.74	1.08	-0.69
Northwest Slope Cascades	13.88	+0.67	59.27	+3.88	7.31	-3.09
Southwest Slope Cascades	9.98	+1.30	45.31	+3.67	6.25	-1.05

Northeastern Washington - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.

Southeastern Washington - Touchet, Tucannon, and Palouse Drainages.

Central Washington - Yakima, Wenatchee, and Chelan Drainages.

North Central Washington - Methow and Okanogan Drainages.

Northwest Slope Cascades - Puget Sound Drainages.

Southwest Slope Cascades - Lower Columbia Drainages.

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

2/ - Departure from 15-year (1958-72) drainage division average.

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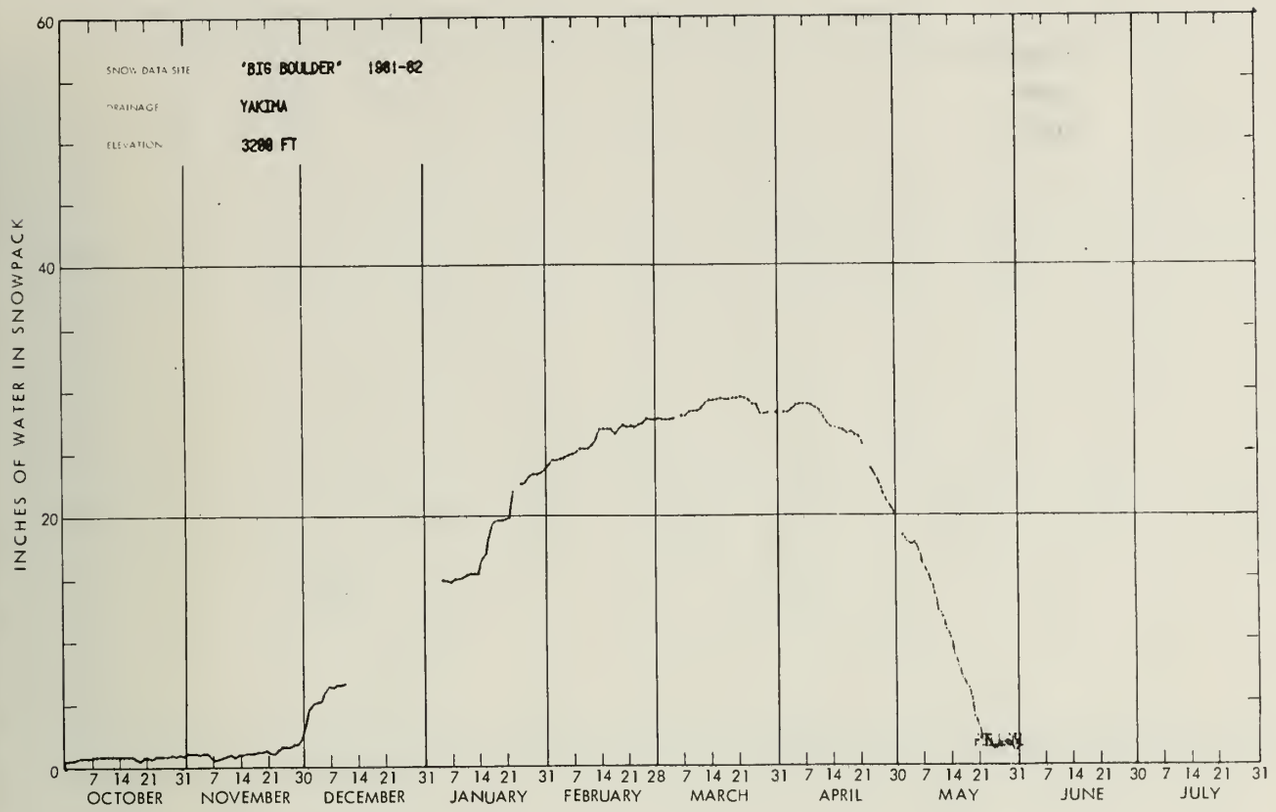

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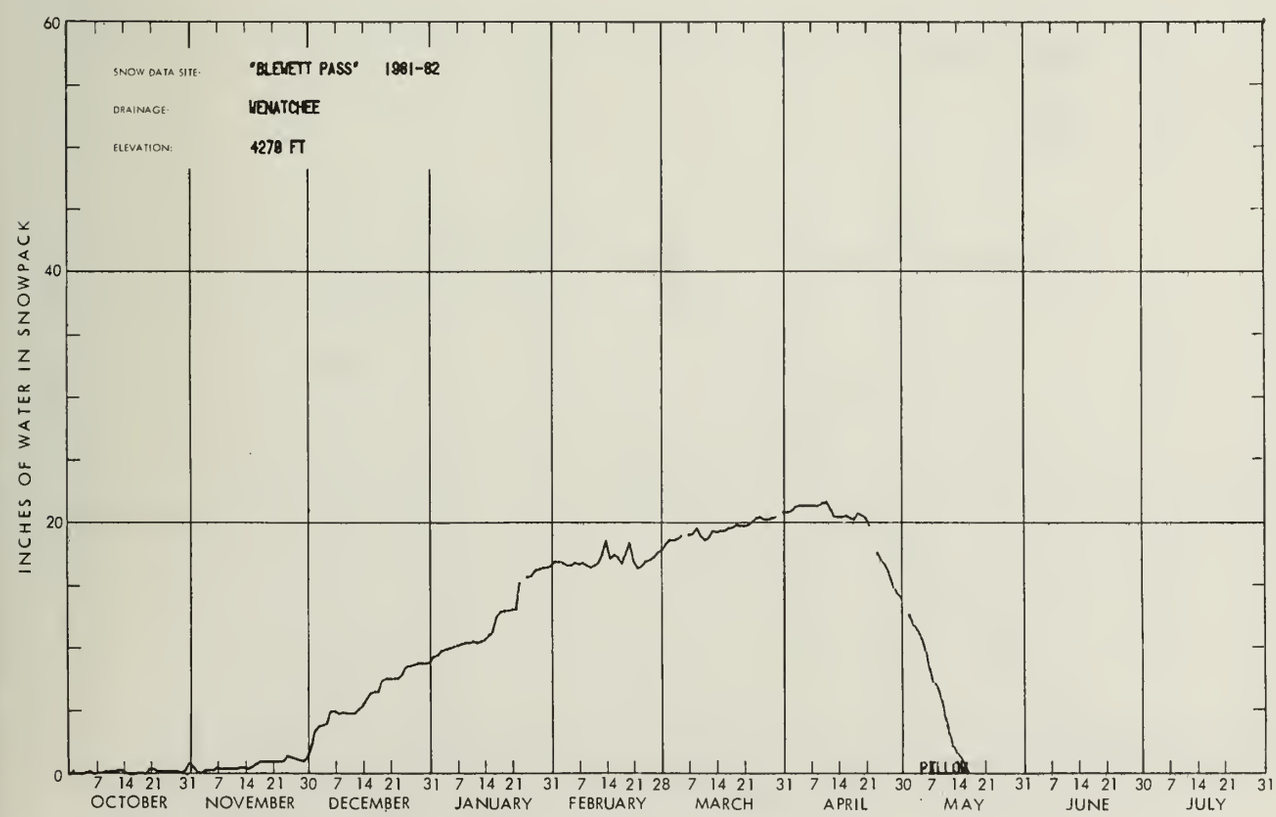

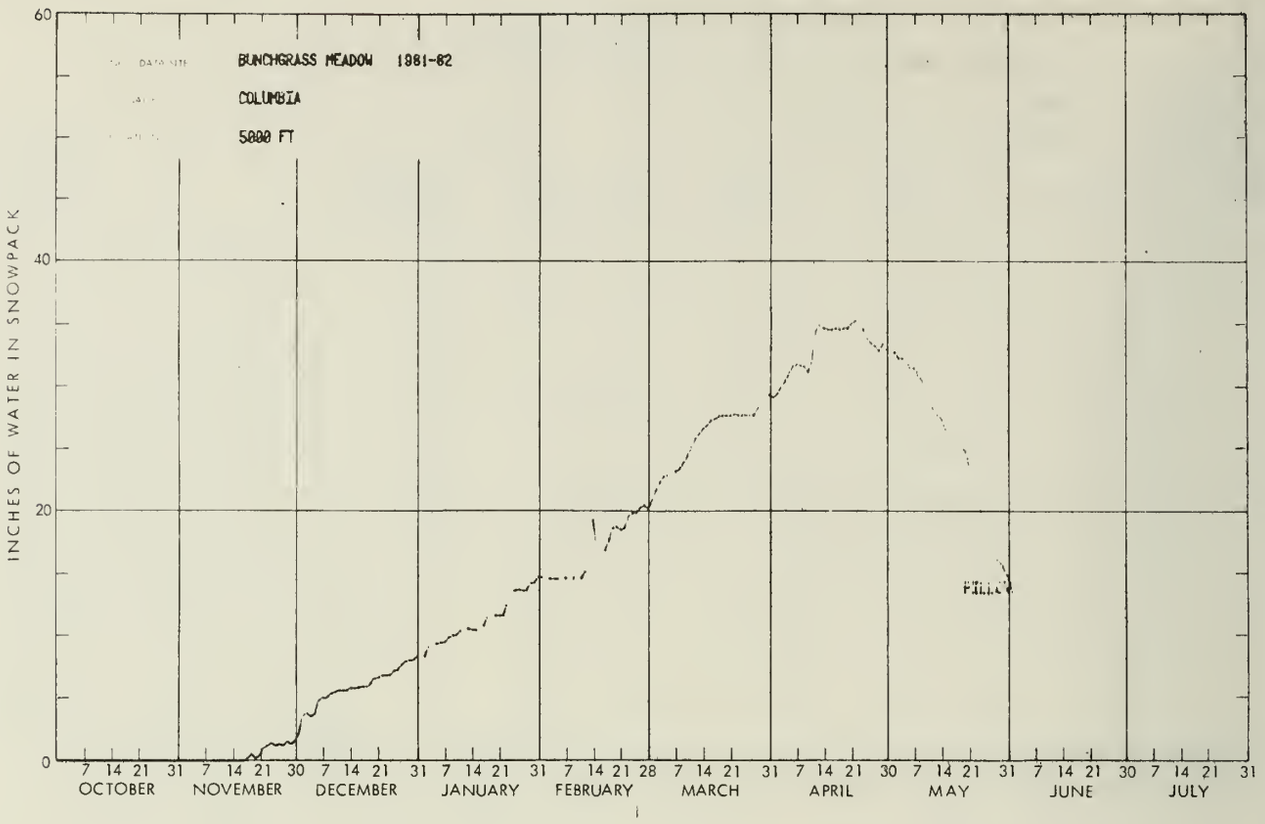
BUNCHGRASS MEADOW 1981-82
COLUMBIA
5000 FT
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
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JANUARY
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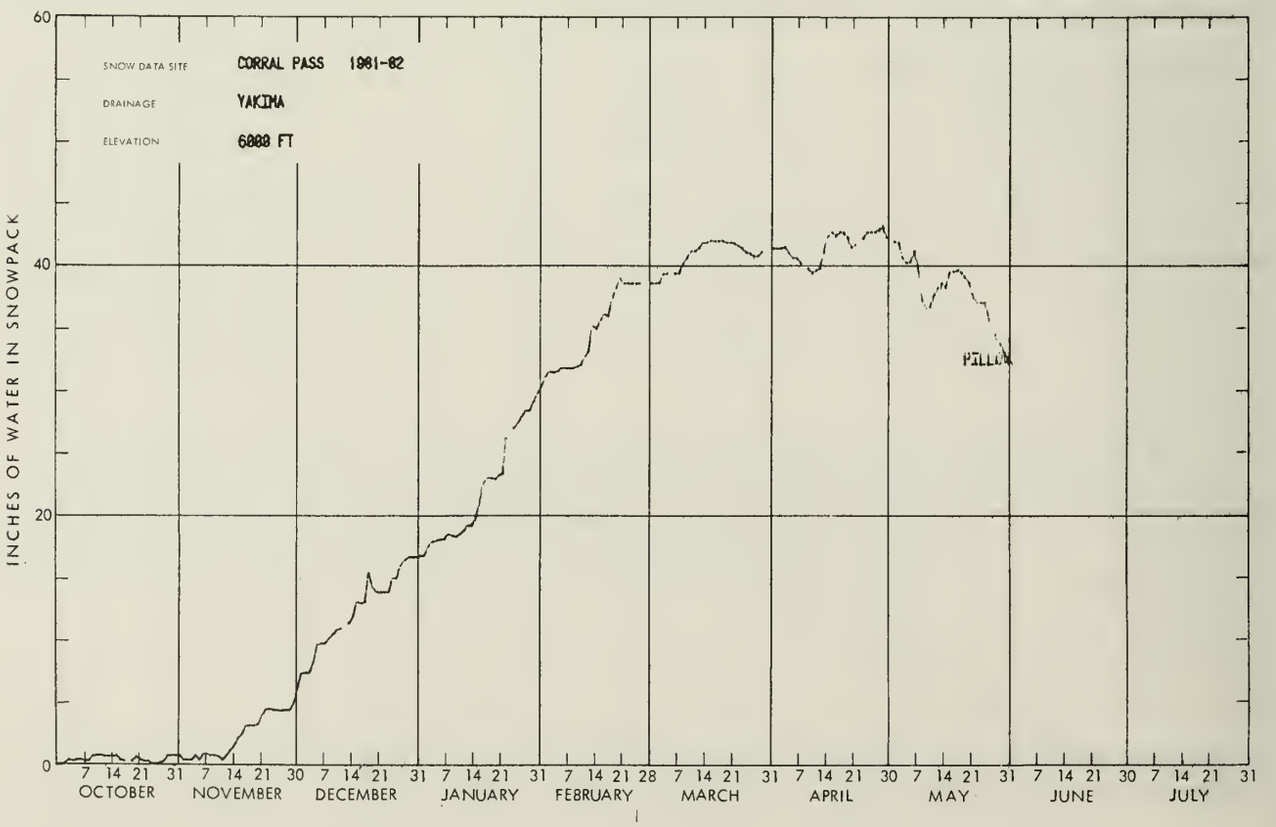
MAY
JUNE
JULY


SNOW DATA SITE
CORRAL PASS 1981-82
DRAINAGE
YAKIMA
ELEVATION
6000 FT
INCHES OF WATER IN SNOWPACK
0
20
40
60
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
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FEBRUARY
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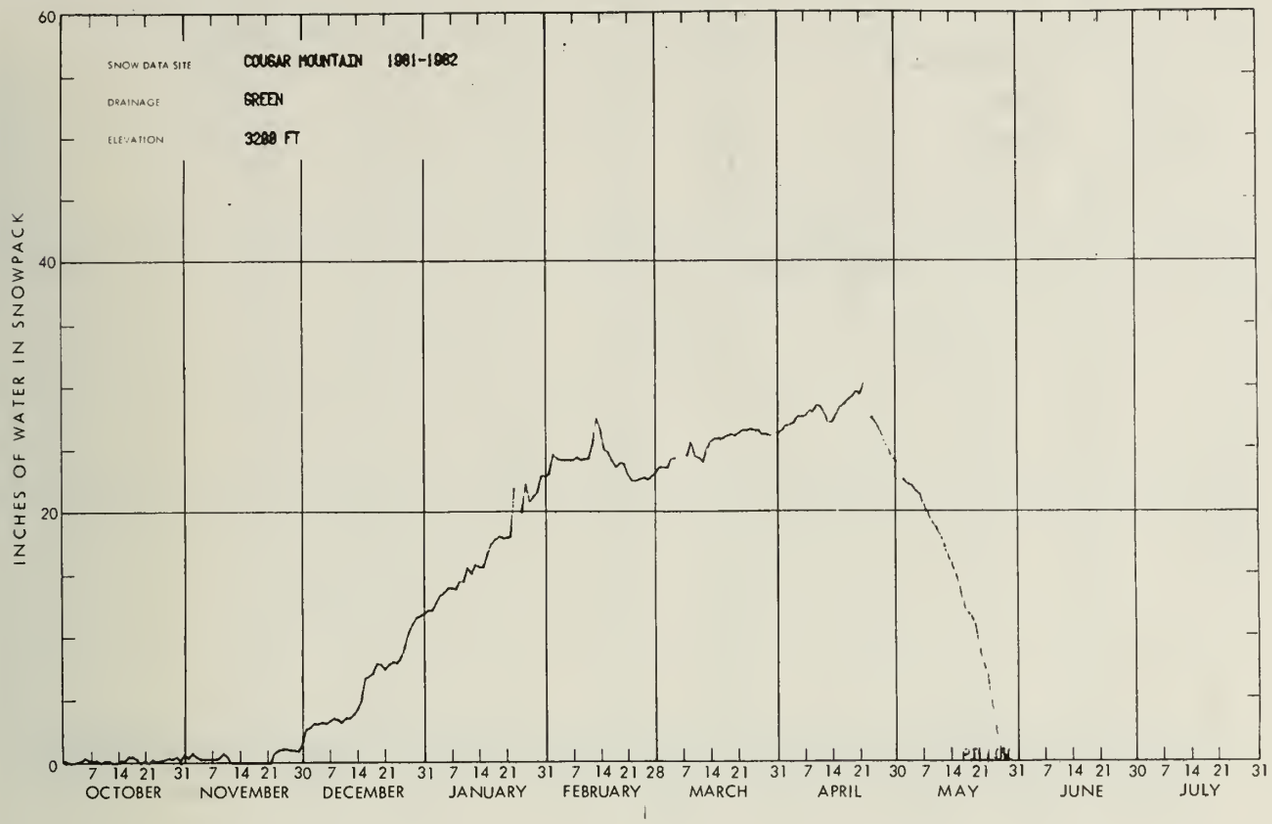
JUNE
JULY

WSFB-X13C



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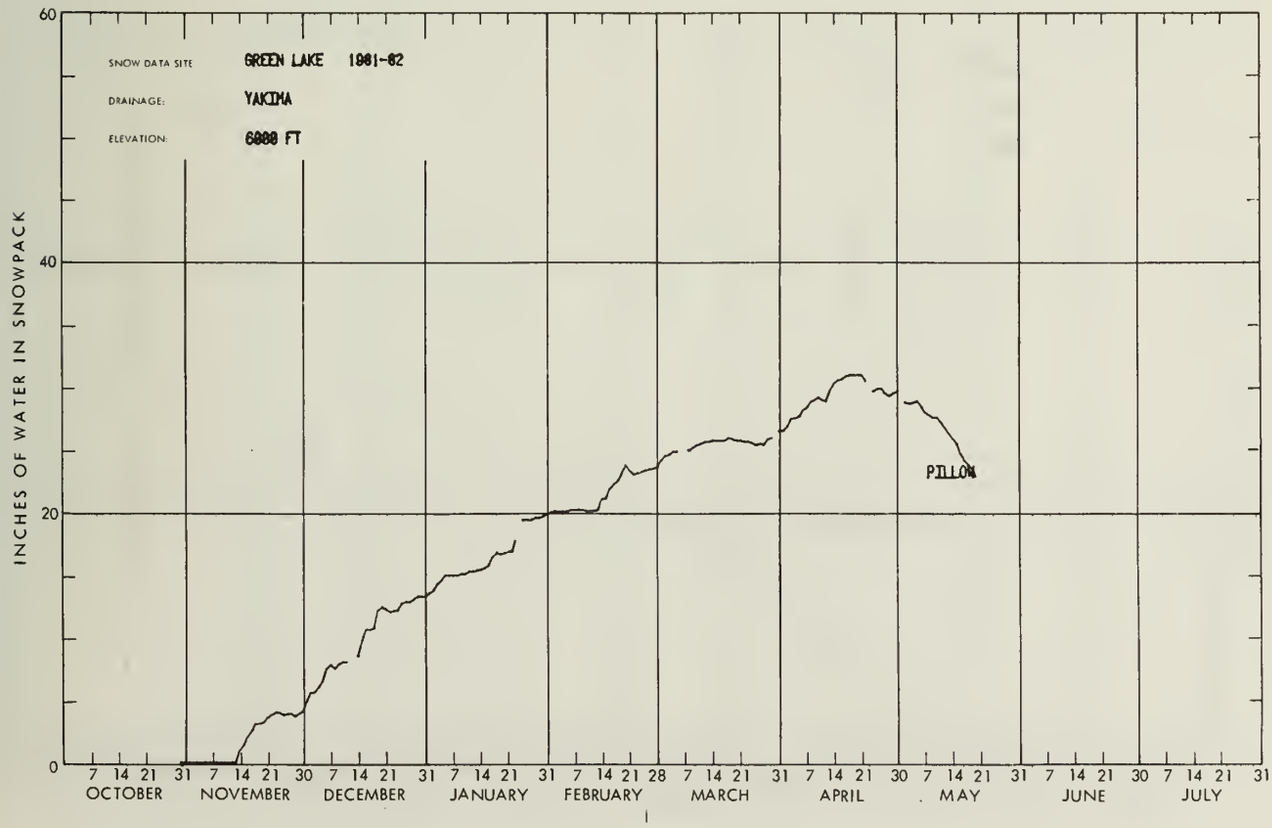
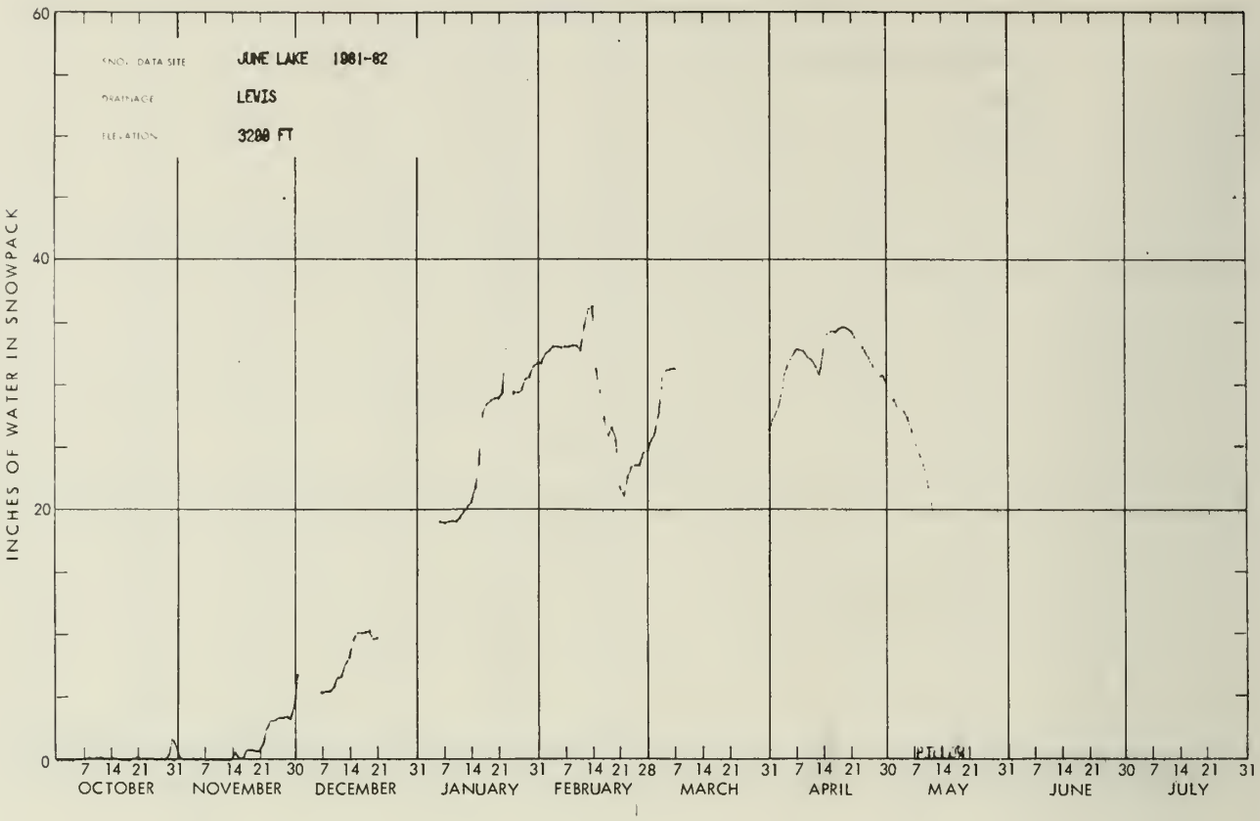
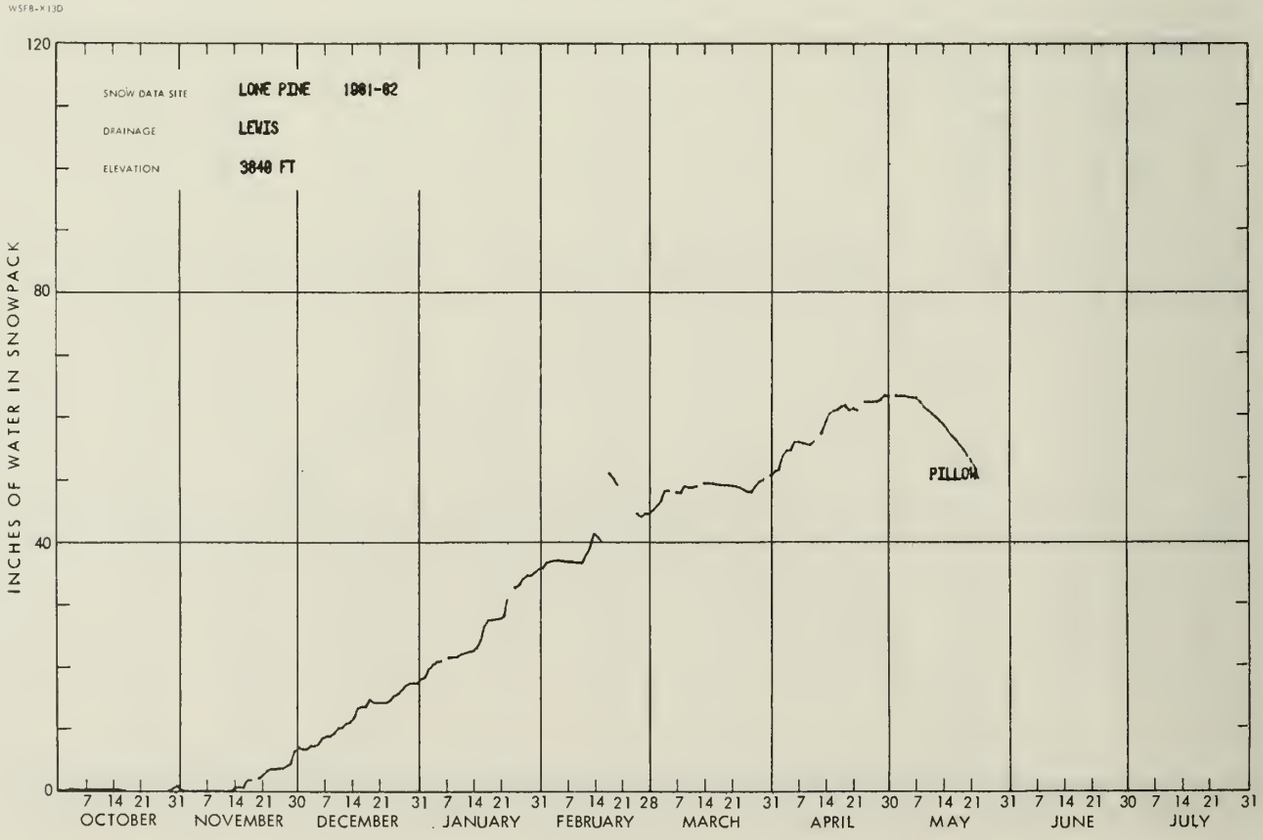
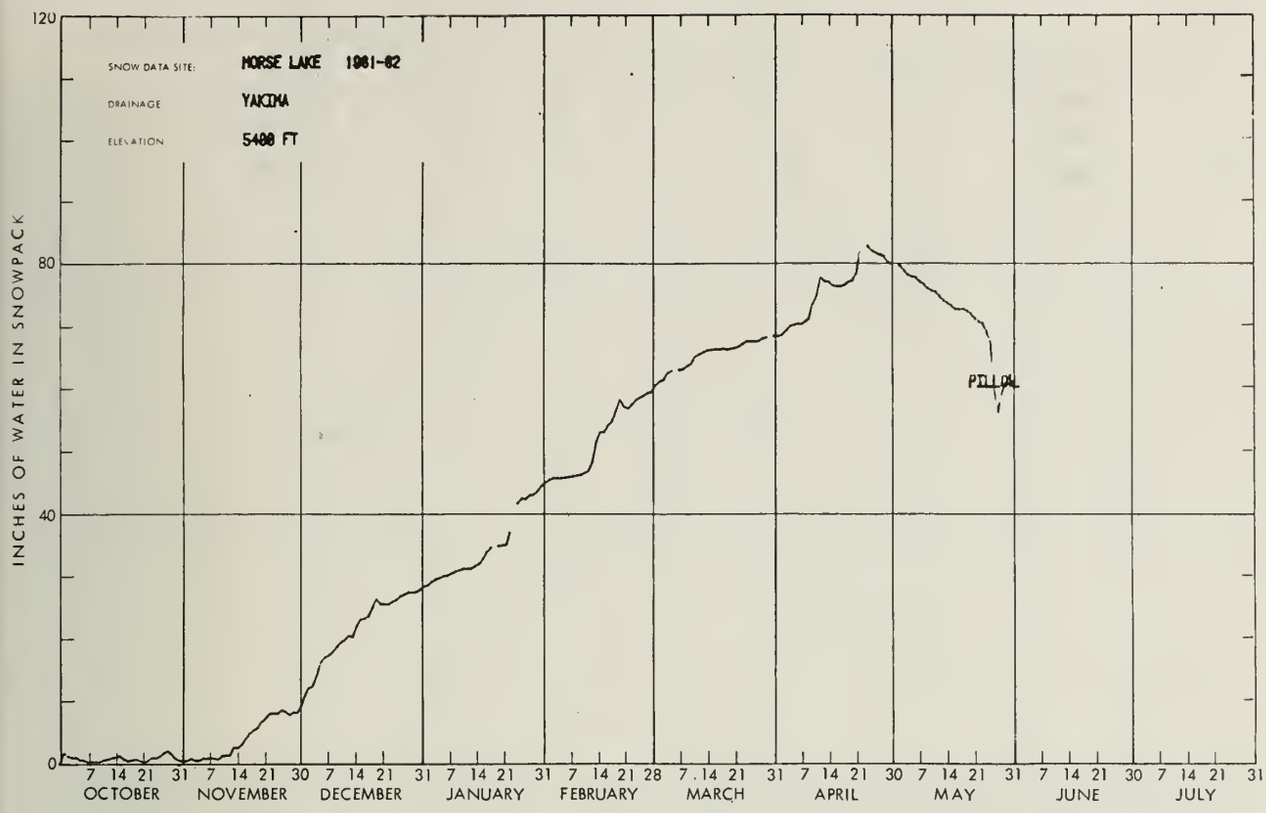



SNOW DATA SITE JUNE LAKE 1981-82
DRAINAGE LEVIS
ELEVATION 3200 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE LONE PINE 1981-82
DRAINAGE LEVIS
ELEVATION 3840 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

WSFB-X13D



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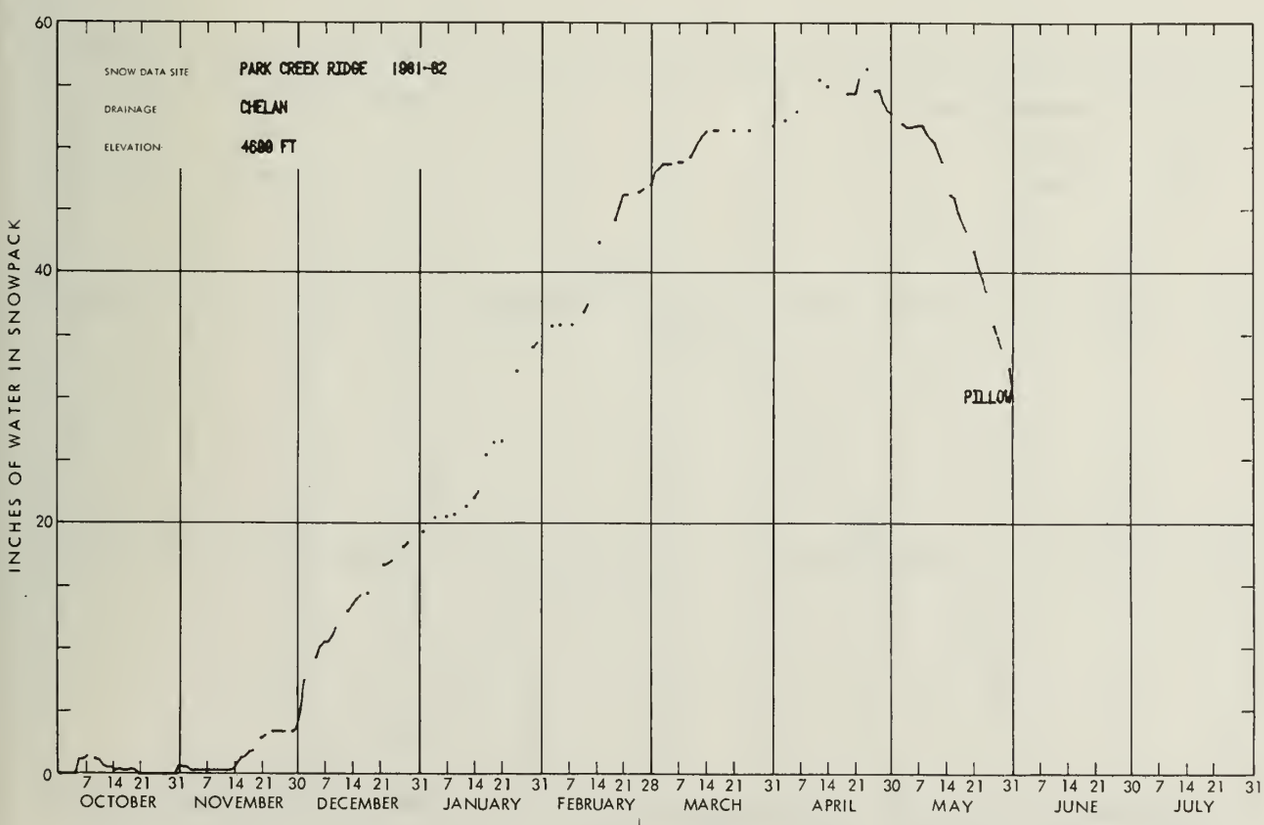

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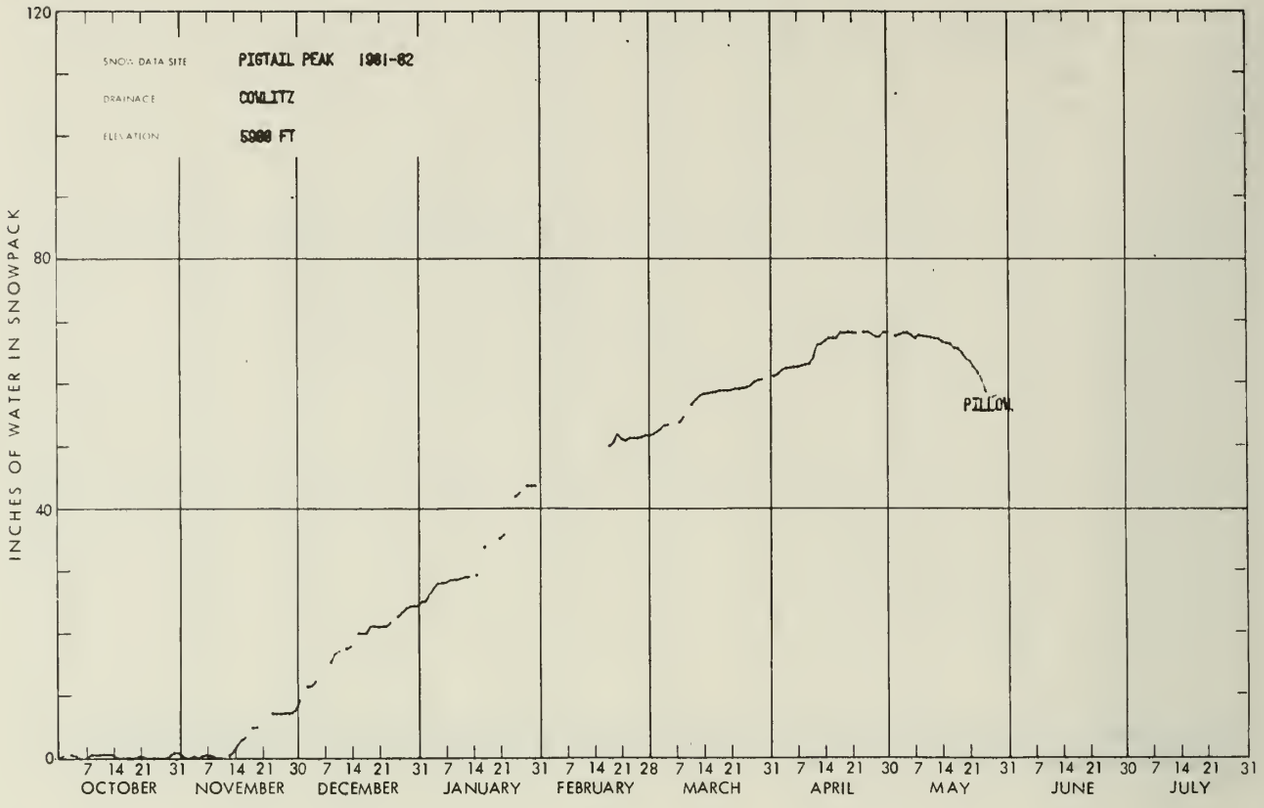

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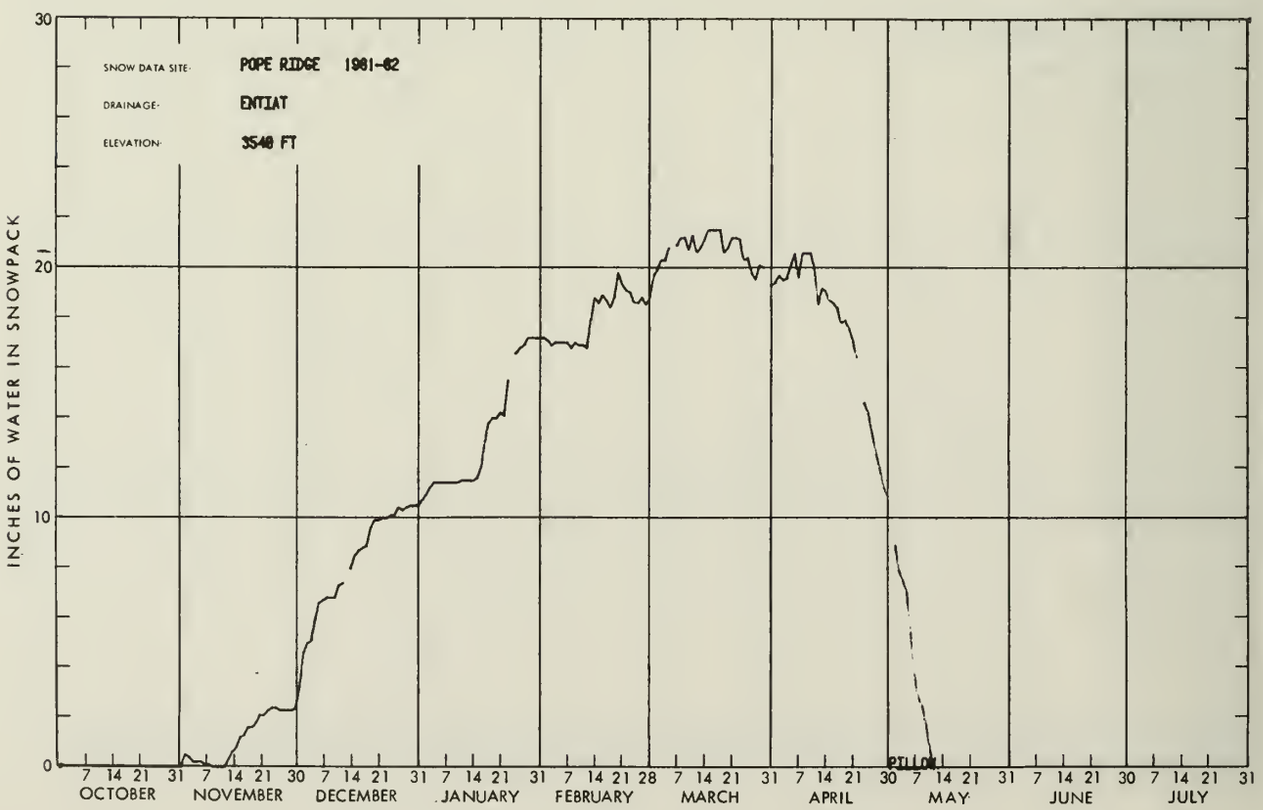

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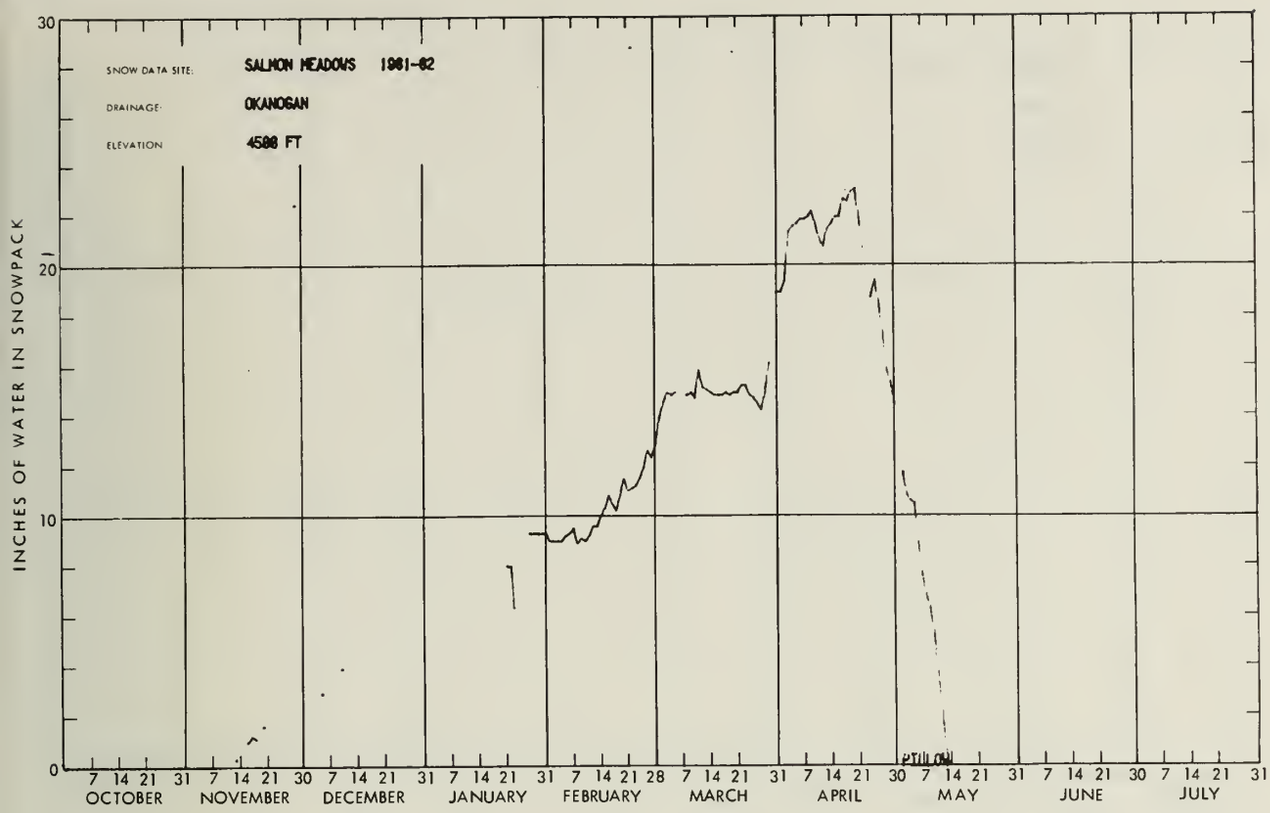

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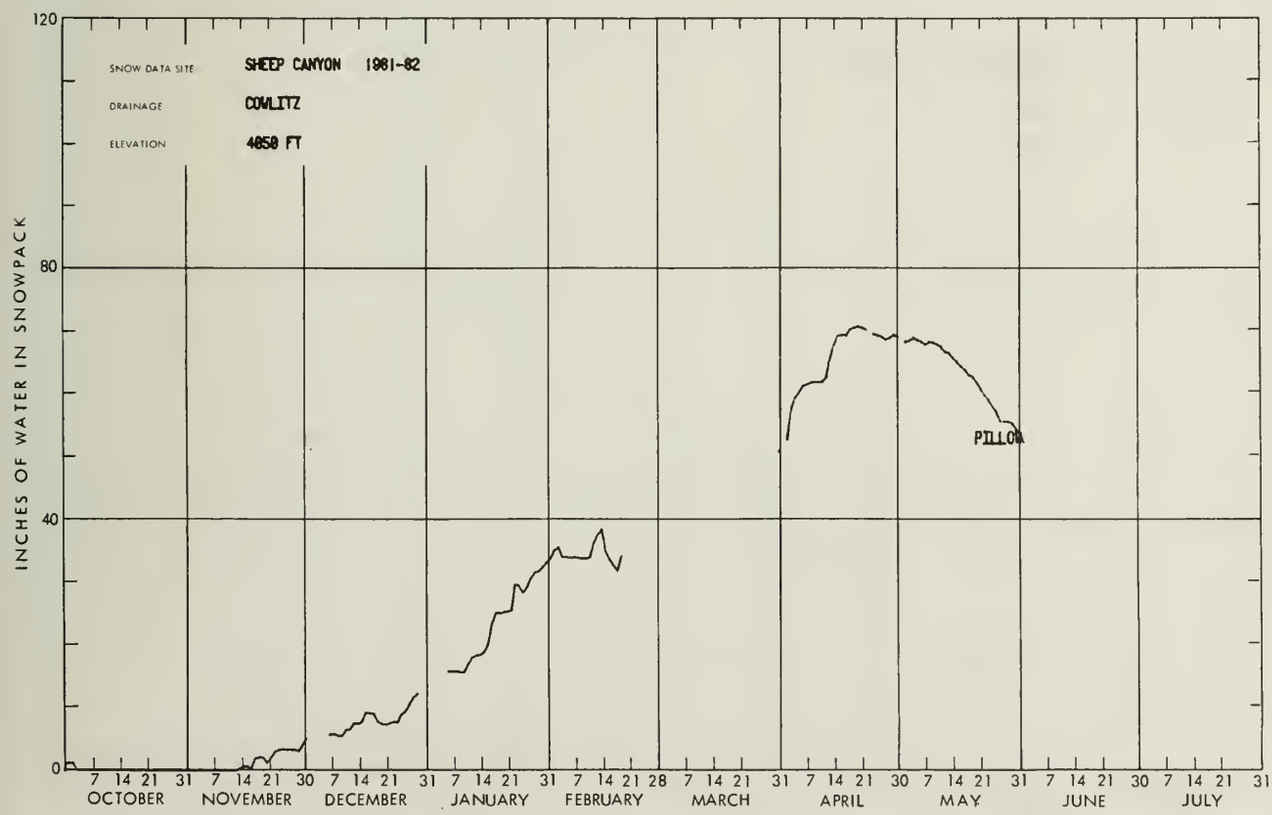
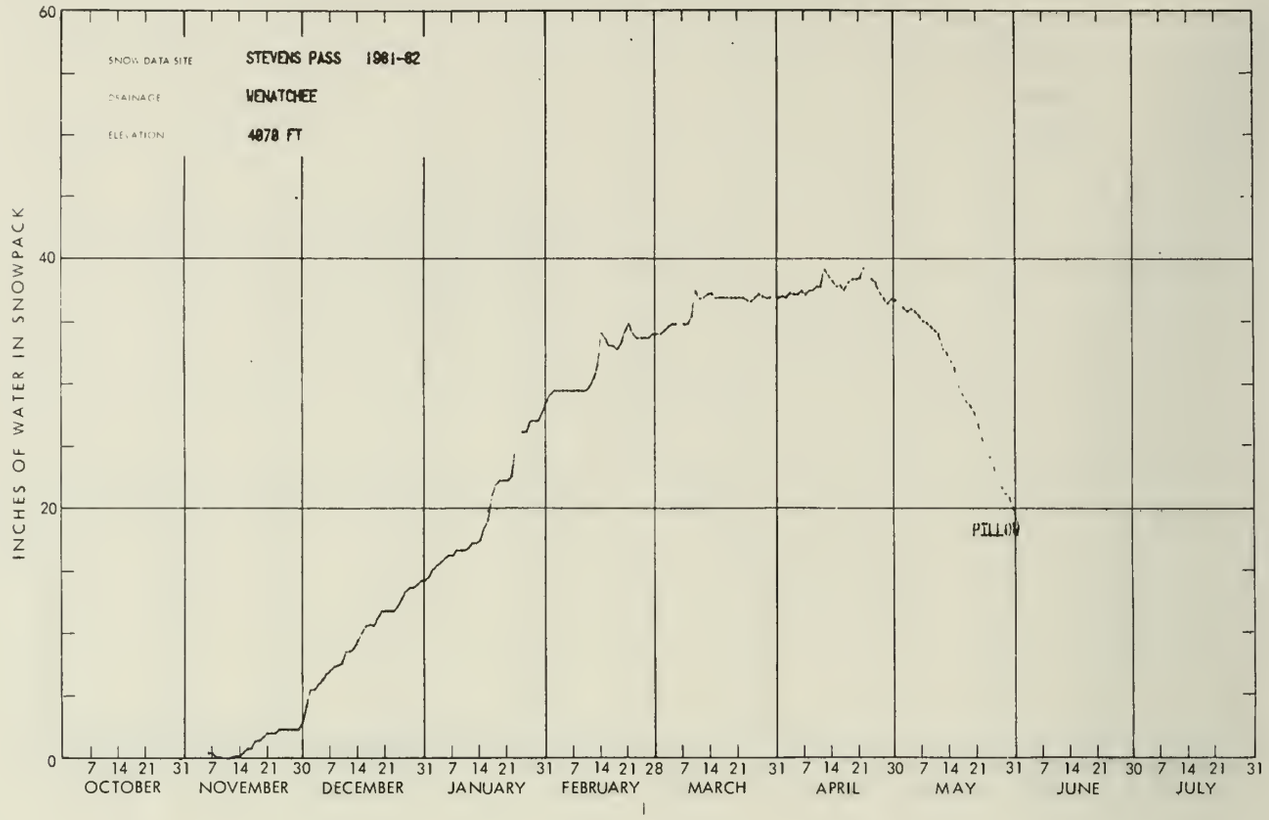
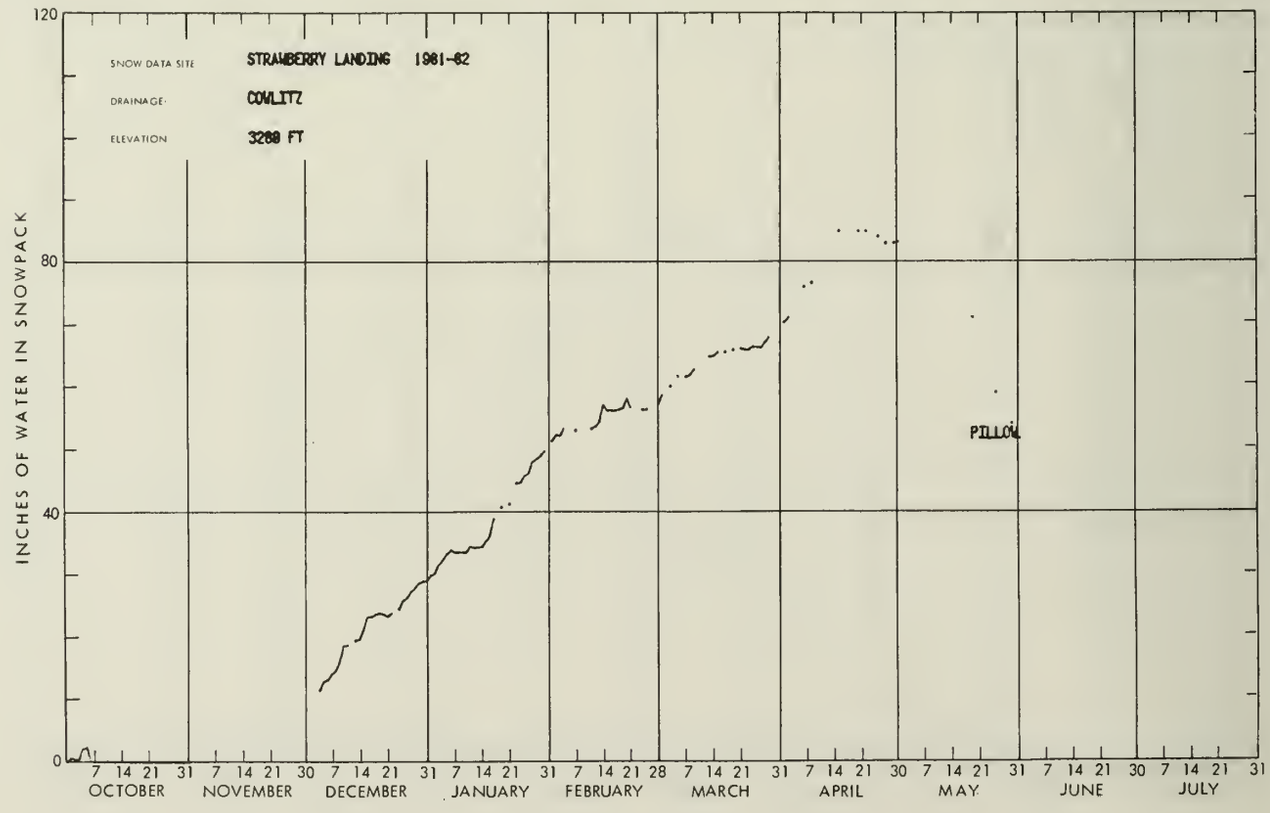
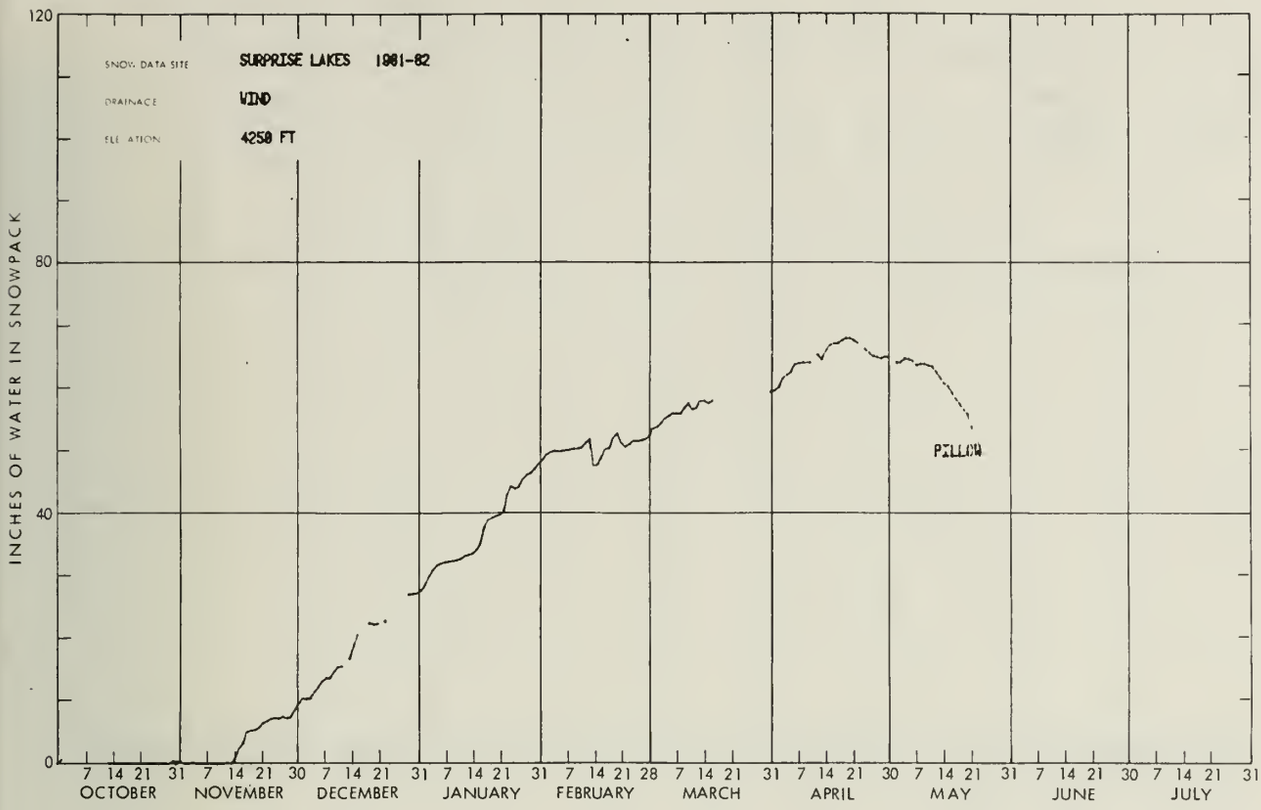
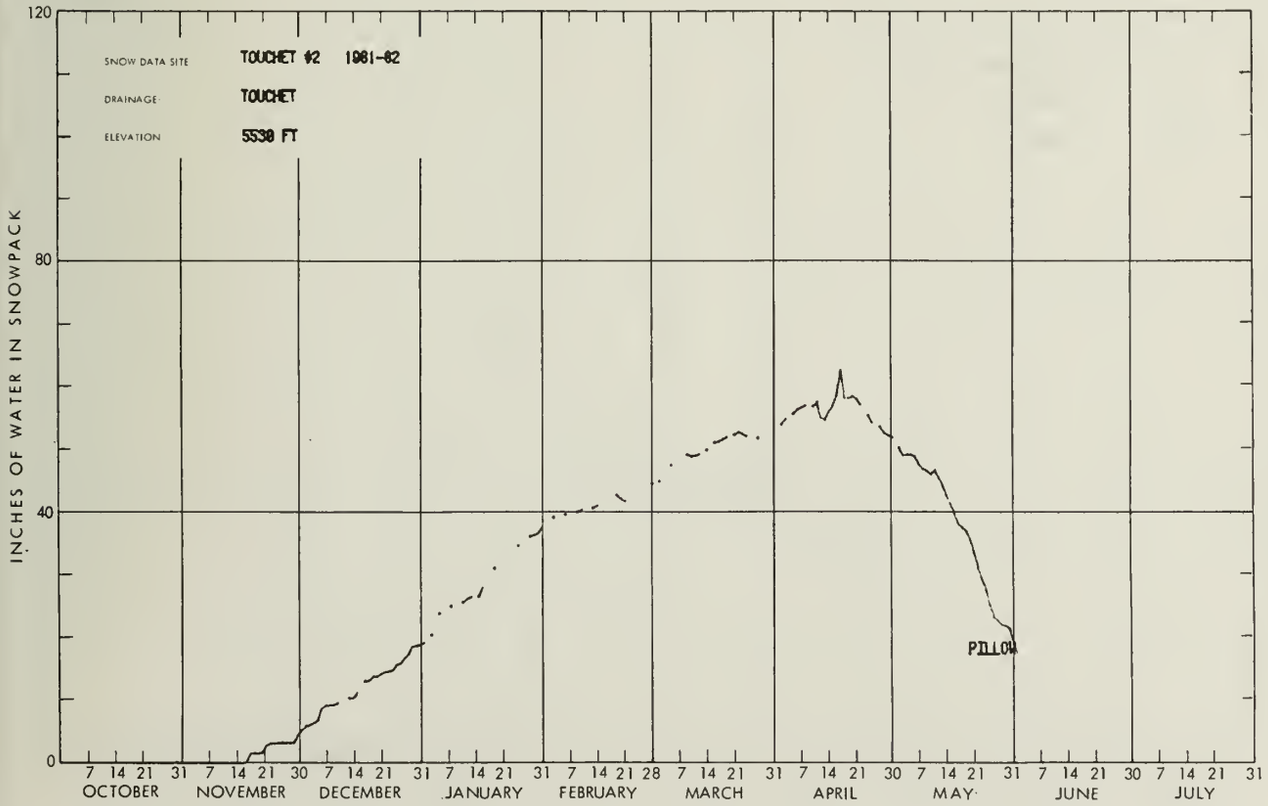



SNOW DATA SITE STEVENS PASS 1981-82
DRAINAGE WENATCHEE
ELEVATION 4878 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE STRAWBERRY LANDING 1981-82
DRAINAGE COWLITZ
ELEVATION 3200 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY


SNOW DATA SITE
SURPRISE LAKES 1981-82
DRAINAGE
WIND
ELEVATION
4250 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY


SNOW DATA SITE
TOUCHET #2 1981-82
DRAINAGE
TOUCHET
ELEVATION
5530 FT
INCHES OF WATER IN SNOWPACK
120
80
40
0
PILLOW
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
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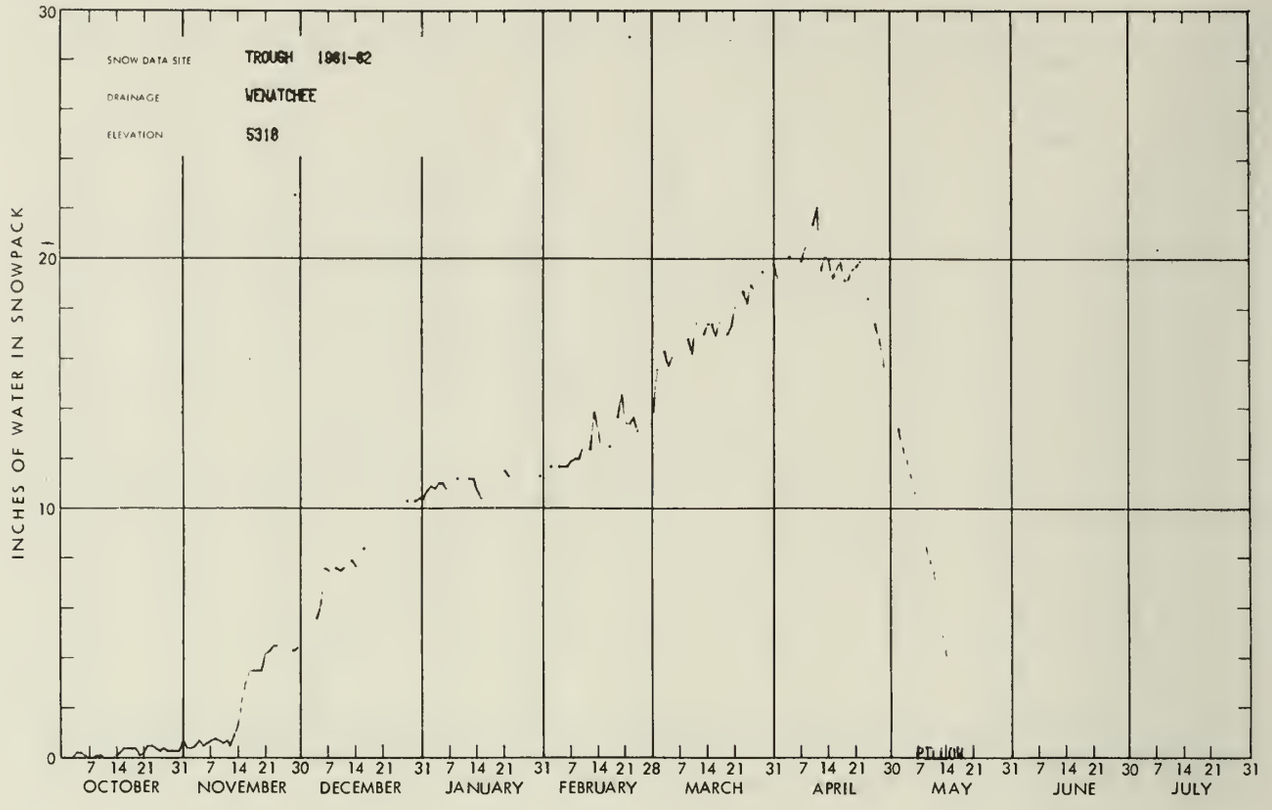
JUNE
JULY

WSFB-X13B



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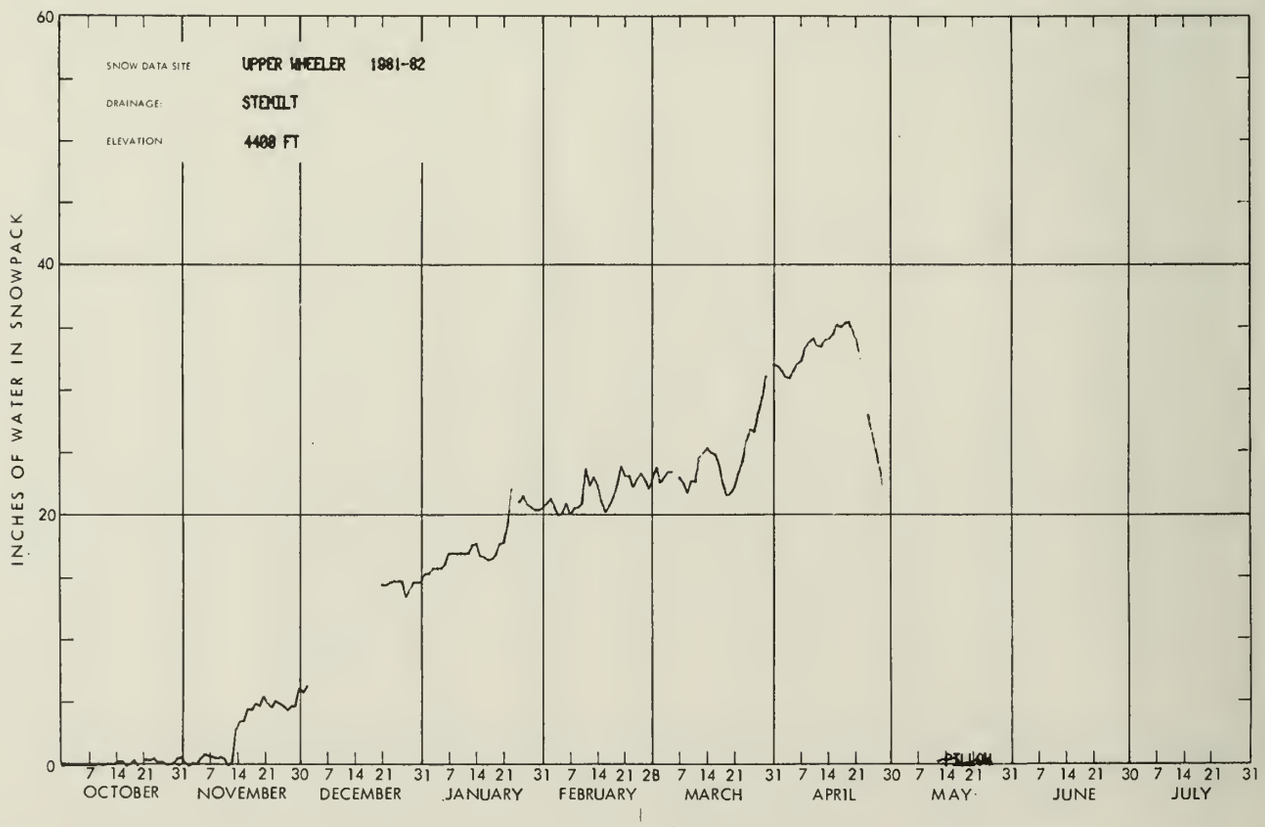

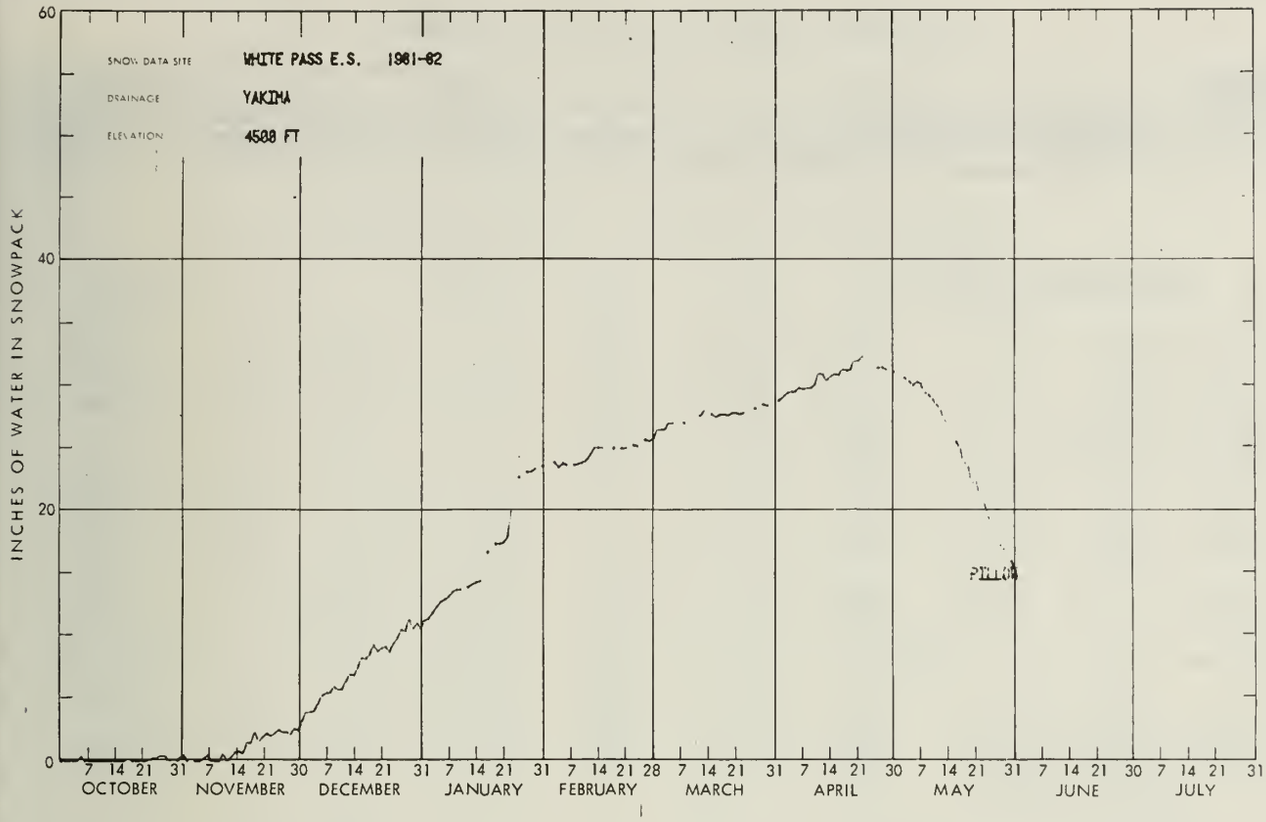
SNOW DATA SITE
WHITE PASS E.S. 1981-82
DRAINAGE
YAKIMA
ELEVATION
4500 FT
INCHES OF WATER IN SNOWPACK
60
40
20
0
7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 31 7 14 21 28 7 14 21 31 7 14 21 30 7 14 21 31 7 14 21 30 7 14 21 31
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY

ASFB-X4-L

SNOW DATA TO JUNE 1, 1982 - APPENDIX 1

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
UPPER COLUMBIA DRAINAGE							
PEND OREILLE RIVER							
Baree Creek	15B11	5500	5/13	110	52.8	20.0	41.5
Baree Midway	15B16	4600	5/13	75	35.1	5.5	25.0
Baree Trail	15B15	3800	5/13	0	0.0	0.0	0.0
Heart Lake Trail	14C10	4800	5/31	8	4.0	0.0	-
Hoodoo Basin	15C10	6000	5/14	126	67.0	33.6	50.5
				93	51.1	17.6	39.0
Hoodoo Creek	15C01	5900	5/14	120	60.5	28.7	46.2
				96	49.4	16.9	36.5
Lookout	15B02	5250	5/14	72	32.2	8.6	30.9
			6/1	34	18.2	0.0	15.0
Nelson	2D04-Can	3050	5/14	11	4.8	0.0	0.9*
			6/1	0	0.0	0.0	0.0*
Schweitzer Ridge	16A05	6100	6/1	79	41.8	13.2	-
Schweitzer Bowl	16A06	4500	6/1	16	9.3	-	-
KETTLE RIVER							
Big White Mtn.	2E03-Can	5500	5/14	51	22.2	18.1	16.9*
			6/1	26	11.6	7.6	9.7*
Graystoke Lake	2F04-Can	5950	5/14	49	20.6	11.7	19.7*
Monashee Pass	2E01-Can	4500	5/12	30	13.0	8.1	8.5*
			5/28	11	4.9	0.0	1.9*
SPOKANE RIVER							
Granite Peak	15B13A	6000	6/1	85	35.8	9.4	31.5
Lookout	15B02	5250	5/14	72	32.2	8.6	30.9
			6/1	34	18.2	0.0	15.0
Lost Lake	15B14A	6000	6/1	108	49.6	16.2	46.4
OKANOGAN RIVER							
Aberdeen Lake	1F01A-Can	4300	5/14	2.8	1.1	0.0	0.1*
Blackwall Mountain	2G03-Can	6250	5/14	80	36.7	18.9	34.7*
				Late Report		14.1	27.0*
Brenda Mine	2F18-Can	4800	5/13	17	7.0	1.5	1.9*
			5/31	0	0.0	0.0	0.0*
Brookmere	1C01-Can	3200	5/14	9.4	3.2	0.0	1.7*
			6/1	0	0.0	-	0.0*
Enderby	1F04-Can	6250	5/13	126	55.9	41.7	43.1*
			5/31	97	52.0	33.3	38.6*
Grayback Res.	2F08-Can	5225	5/27	2.4	1.0	0.0	0.9*
Graystoke Lake	2F04-Can	5950	5/14	49	20.6	10.2	19.7*
Hamilton Hill	2G06-Can	4900	5/14	24	11.4	1.4	5.9*

\# Average based on 1963-1977 period
* Average for years of record

SNOW DATA TO JUNE 1, 1982 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Number	Elevation	THIS YEAR Date of Survey	Snow Depth (Inches)	Water Content (Inches)	PAST RECORD Water Content (inches) Last Year	Average #
OKANOGAN RIVER (Cont.)							
Isintok Lake	2F11-Can	5510	5/15	18	6.7	0.0	4.1*
Lost Horse Mountain	2G04-Can	6300	5/14	32	10.8	-	9.4*
			6/1	15	6.0	0.9	3.9*
Missezula Mountain	2G05-Can	5100	5/13	14	5.9	0.0	2.2*
Mission Creek	2F05-Can	6000	5/14	6	24.8	16.5	18.9*
			6/1	29	14.7	9.6	12.1*
Monashee Pass	2E01-Can	4500	5/12	30	13.0	8.1	8.5*
			5/28	11	4.9	0.0	1.9*
Mount Kobau	2F12-Can	5950	5/14	42	15.4	9.3	9.3*
			5/30	27	11.4	0.0	3.6*
Silver Star Mountain	2F10-Can	6050	5/15	75	36.9	21.7	25.2*
			5/29	55	27.9	7.0	15.9*
Summerland Reservoir	2F02-Can	4200	5/15	13	5.1	0.0	2.0*
Trout Creek	2F01-Can	4700	5/13	7.5	2.7	0.5	1.6*
Vaseux Creek	2F20-Can	4600	5/14	3.5	1.4	0.0	0.2*
White Rocks Mountain	2F09-Can	6000	5/14	50	23.7	11.6	17.1*
			6/1	19	9.6	0.0	10.2*
ENTIAT RIVER							
Blue Creek G.S.	20B28a	5425	5/25	60	30.2	-	26.4*
Entiat Meadows +	20A33a	4540	5/25	30	15.1	-	27.7*
Entiat River Trail +	20A34a	3325	5/25	0	0.0	-	0.0*
Four Mile Ridge +	20B27a	6800	5/25	66	33.3	-	27.3*
Fox Camp +	20A36a	6510	5/25	128	64.5	-	56.6*
Pugh Ridge +	20A32a	6725	5/25	57	28.7	-	27.1*
Shady Pass	20A37	6200	5/26	48	24.3	-	17.1*
Snow Brushy +	20A35a	3910	5/25	21	10.6	-	10.5*
Tommy Creek +	20B21a	4900	5/25	6	3.0	-	3.0*
WENATCHEE RIVER							
Stevens Pass	21B01	4070	5/27	82	41.1	0.0	40.6
Stevens Pass Sand Shed	21B45	3700	5/27	35	18.3	0.0	18.7
YAKIMA RIVER							
Bumping Lake	21C08	3450	5/13	0	0.0	-	3.6
Bumping Lake New	21C36	3400	5/13	7.8	4.1	-	11.8
Stampede Pass SP	21B10	3860	5/13	88	59.6	2.0	41.7
			5/27	44	26.4	-	26.9
Tunnel Avenue	21B08	2450	5/11	29	14.4	-	14.4
White Pass (E. Side)	21C28	4500	5/12	54	25.5	-	29.1
						-	17.4

\# Average based on 1963-77 period
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

NSFB-X4-L

SNOW DATA TO JUNE 1, 1982 - APPENDIX 3

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE						Water Content (inches)	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average #
CHELAN LAKE BASIN							
Little Meadows +	20A24a	5275	5/14	118	55.9	-	-
Lyman Lake	20A23A	5900	5/14	156	74.2	-	-
Park Creek Ridge	20A12A	4600	5/14	97	46.0	-	-
LOWER COLUMBIA DRAINAGE							
LEWIS RIVER							
June Lake	22C05	3200	5/15	SNOTEL	11.7	0.0	-
			6/1	SNOTEL	0.0	0.0	-
Lone Pine Shelter	21C26	3800	5/15	SNOTEL	57.9	10.9	-
			5/23	SNOTEL	50.0	0.0	-
Surprise Lakes	21C13A	4250	5/15	SNOTEL	60.3	-	-
			5/24	SNOTEL	49.1	-	-
COWLITZ RIVER							
Sheep Canyon	22C10	4050	5/15	SNOTEL	65.0	3.5	-
			6/1	SNOTEL	51.9	0.0	-
Strawberry Landing	22C08	3280	5/14	SNOTEL	71.0	6.1	-
			5/31	SNOTEL	51.6	2.2	-
White Pass (E. Side)	21C28	4500	5/12	54	25.5	-	29.1
						-	17.4
PUGET SOUND DRAINAGE							
WHITE RIVER							
Corral Pass	21B13	6000	5/15	SNOTEL	38.1	-	-
			6/1	SNOTEL	32.0	-	-
Morse Lake	21C17	5400	5/15	SNOTEL	73.2	-	-
			6/1	SNOTEL	60.2	-	-
GREEN RIVER							
Cougar Mountain	21B42	3200	5/15	SNOTEL	15.0	-	-
			6/1	SNOTEL	0.0	-	-
Stampede Pass	21B10	3860	5/13	88	59.6	2.0	41.7
			5/27	44	26.4	-	26.9
SKYKOMISH RIVER							
Stevens Pass	21B01	4070	5/27	82	41.1	0.0	40.6
Stevens Pass Sand Shed	21B45	3700	5/27	35	18.3	0.0	18.7

Average based on 1963-77 period
\+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO JUNE 1, 1982 - APPENDIX 4

SNOW			THIS YEAR			PAST RECORD	
DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
SKAGIT RIVER							
Harts Pass	20A05	6500	5/15	SNOTEL	40.0	-	-
			5/31	SNOTEL	33.1	-	-
Lyman Lake	20A23A	5900	5/14	156	74.2	-	-
Rainy Pass	20A09	4780	5/15	SNOTEL	47.6	-	-
			6/1	SNOTEL	36.2	-	-
BAKER RIVER							
Dock Butte	21A11A	3800	5/1	168	79.0	22.0	79.3
				Late Report		-	57.2
Easy Pass	21A07A	5200	5/1	221	104.0	45.0	97.6
				Late Report		-	75.8
Jasper Pass	21A06A	5400	5/1	236	111.0	55.0	99.8
				Late Report		-	85.6
Marten Lake	21A09A	3600	5/1	196	92.0	33.0	87.0
				Late Report		-	68.9
Mount Blum +	21A18a	5800	5/1	184	86.0	-	76.1
				Late Report		-	72.1
Rocky Creek	21A12A	2100	5/1	47	33.0	0.0	28.4
				Late Report		-	2.2
Schreibers Meadow	21A10A	3400	5/1	145	68.0	12.0	70.5
				Late Report		-	46.3
S. F. Thunder Creek	21A14A	2200	5/1	1	0.5	-	2.0
Watson Lakes	21A08A	4500	5/1	151	77.0	23.0	77.7
				Late Report		-	62.6

CORRECTIONS AND ADDITIONS - 1982 SNOW REPORTS

March 1

KETTLE RIVER							
Summit G.S.	18A07	4600	2/26	22	6.4	4.1	7.3

April 1

YAKIMA RIVER & WHITE RIVER							
Corral Pass	21B13	6000	4/5	124	51.5	22.4	43.4

\# Average based on 1963-77 period
* Average for years of record
\+ Snow water equivalent estimated from aerial stadia observation

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U. S. Department of Agriculture
  Forest Service
U. S. Department of Commerce
  NOAA, National Weather Service
U. S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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